

MDOT – Materials Laboratories

Environmental Management Plan

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Executive Summary

The goal of this EMP was to develop and implement a comprehensive Environmental Management Plan for MDOT Materials Laboratories. This goal was achieved through performance of environmental audits to identify potential environmental impacts, and by identifying the roles and responsibilities of personnel related to maintaining compliance with regulations. Identification of procedural practices and deficiencies in equipment and/or facilities was done during the audits. The EMP will be maintained by supporting documentation to identify specific elements, procedures, products, and services that fall under the control of MDOT Laboratories. Furthermore, a computer based compliance tracking tool will be utilized to follow compliance issues from identification to closure. A safety audit was also performed to identify potential concerns in safety gaps with employee functions and equipment and to provide recommended solutions. The ultimate goal is to maintain reasonably assured environmental compliance with all applicable Federal, State, and local laws, regulations and requirements by maintaining environmental stewardship of assets and full discharge of environmental responsibilities. The Environmental Management Plan is a continuous process that will require occasional reviews to maintain and update. The establishment of a fully functioning Environmental Management Plan (EMP) will serve as the framework for establishing, reviewing and maintaining environmental compliance objectives and targets throughout MDOT Materials Laboratories. The EMP ultimately maintains environmental policy and develops the procedures to achieve the goals and targets of environmental visions within MDOT Materials Laboratories.

Thompson developed a draft audit checklist from performing a preliminary audit of the Central Materials Laboratory. Three audits of the six MDOT District Materials Laboratories and the Central Materials Laboratory were performed during the study. Identification of procedural practices and deficiencies in equipment and/or facilities were made during the audits. A final inspection checklist was developed for the Materials Laboratories in the six districts and the Central Materials Laboratory, as well as, the Environmental Management Program Guide. The Environmental Management Plan will be maintained by routine inspections, training, review of procedures and documents, and implementation of corrective or preventative actions.

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Section 1

Section 1: Introduction/Background

Thompson Engineering was tasked to develop and implement a comprehensive Environmental Management Plan (EMP) for the MDOT Materials Laboratories statewide. The establishment of a fully functioning (EMP) will serve as the framework for establishing, reviewing and maintaining environmental compliance objectives and targets throughout MDOT Laboratories. The EMP ultimately maintains environmental policy and develops the procedures to achieve the goals and targets of various Plans within MDOT Laboratories. A safety audit was also performed, as an add-on with no additional cost or time extension to the project, to identify potential concerns in safety gaps with employee functions and equipment and provide recommendations as for solutions.

Thompson developed a draft audit checklist from performing a preliminary audit of the Central Laboratory. Three audits, occurring in May 2011, August 2011, and March 2012, of the six MDOT District Laboratories and the Central Laboratory were performed during the study. Identification of waste streams, procedural practices and deficiencies in equipment and/or facilities was made during the audits. A final inspection checklist was developed for the six districts and the Central Laboratory, as well as, the Environmental Management Program Guide. The safety audit identified several areas of concern that MDOT may wish to address in the future. The Environmental Management Plan will be maintained by routine inspections, training, review of procedures and documents, and implementation of corrective or preventative actions.

Section 2

SECTION 2: ENVIRONMENTAL AUDIT FINDINGS

Overview

The three audits of the Central Lab and each district lab identified several areas where environmental impacts could potentially become an issue. These issues represent potential areas of concern determined by evaluation of current activities performed at the various sites and waste streams associated with each facility.

The district labs perform tests on asphalt, soil, and concrete. The major waste stream is solid waste in the form of asphalt and concrete which was either reused as a beneficial waste or landfilled. However, wastewater (directed to the municipal waste water system) and air pollution in the form of particulate matter exists. The major concern for potential hazardous waste would be the asphalt release agent, typically referred to as BioAct. The used asphalt release agent was either released down the drain to the POTW or collected and disposed of with the used oil generated at the district complexes. Mercury was used in soil tests, but is being phased out in favor of a paraffin test. Until the mercury is completely phased out, each facility should have written procedures and operable spill kits to handle small spills should they occur.

The Central Lab performed all the same tests as the district complexes with additional areas of cement testing and operating a fully functioning chemical laboratory. The waste BioAct at the Central Lab enters the POTW along with chemical wastes that enter drains in the facility. This waste water enters a sump and separator that is maintained by MDOT's Facility Records Management Division. The Central Lab's chemical laboratory had significant amount of unneeded and unused chemicals that should be disposed of accordingly.

Hazardous Materials

Hazardous materials are any substance or mixture of substances having properties that are capable of producing adverse effects on the health, safety or the environment of a human being. Hazardous materials may be generally defined as products with Material Safety Data Sheets (MSDSs). MSDSs specify the hazards associated with such materials and also provide information related to storage, handling, use, and disposal of empty containers and residuals, and/or response to spills. At some locations, improvement in general "housekeeping" measures, such as labeling and storage locations, appeared warranted for some of the materials. In general, MSDSs were not maintained.

Regulatory requirements for maintaining MSDSs are a part of OSHA's hazard communication standard (29 CFR 1910.1200), which requires employers that handle hazardous chemicals to inform employees about the chemical hazards they encounter in the workplace. Review of OSHA compliance was beyond the scope of these environmental audits. However, MSDSs provide useful information for environmental

compliance considerations as well. For example, releases of reportable quantities (RQ's) of hazardous substances are required under the Comprehensive Environmental Response, Compensation, and Liability ACT (CERCLA) regulations. Additionally, if extremely hazardous substances (EHS's) are maintained at a facility above Threshold Planning Quantities (TPQ's), regulations under the Emergency Planning and Community Right to Know Act (EPCRA) require notification to emergency response and local emergency planning agencies.

To aid in future compliance and protect MDOT personnel, we suggest as a Good Management Practice that a master inventory listing of all hazardous materials stored at each facility be developed and maintained at the each facility. A procedure should be established to require the modification of this list as chemical usage changes. MSDS folders should be updated regularly to match the list maintained at the district level. To aid in organization, the MSDS folders should be divided into sections based on chemical type or use, i.e. petroleum products, cleaning supplies, etc. Also, chemicals should be stored in an orderly manner in designated areas.

Hazardous Wastes

Hazardous wastes are regulated under the federal Resource Conservation and Recovery Act (RCRA) and under the hazardous waste regulations adopted by the Mississippi Department of Environmental Quality (MDEQ), which generally are the same as the federal regulations. If a facility generates less than 220 lbs. (25 gallons) of hazardous waste per month, the facility can qualify as a Conditionally Exempt Small Quantity Generator (CE-SQG) and be exempt from the full RCRA regulations applicable to generators of larger quantities. However, disposal of unknown or unneeded chemicals may result in a temporary change in this status.

Infrequent disposal of unneeded chemicals or unknown materials (discussed elsewhere), is apparently the only potential source of hazardous waste generated by routine normal operations.

At this time, none of the facilities are major sources of hazardous waste and do not have to handle universal wastes under specific regulations.

Empty Containers

Empty containers ranging in volume from one-quart to 55- gallons were observed at almost every facility. In most situations, as long as there are no residual fluids in the containers, empty containers can be disposed at a Subtitle D (municipal, solid waste) landfill. It is possible that some containers may require special handling such as "triple rinsing". Certain containers, such as empty drums in good condition, may be recycled by sending them to an approved drum refurbished or returned to the material vendor.

During the inspections, personnel were advised to dispose of empty containers immediately after use by draining the containers well, crushing and placing in a dumpster

for disposal at a Subtitle D Landfill. Attention to former contents of containers should be taken into consideration prior to reusing any container. Also, prior to disposal, rainwater should be prevented from entering the containers.

Unlabeled Containers

Unlabeled containers were observed during the site inspections. Occasionally, on-site personnel could identify the materials.

Facility personnel were directed to label and utilize the contents of unlabeled containers whose contents could be identified (and are viable products for continued use). Unlabeled containers whose contents are unknown constitute waste materials, and are subject to solid waste and/or hazardous waste regulations.

Unusable Products

With the exception of the unneeded chemicals, unusable products are generally considered non-hazardous special wastes. These products are considered unusable based on age, condition of container, lack of need or oversupply. The only facility that had significant amounts of unusable or unneeded materials was the chemical lab at the Central Laboratory in Jackson, MS.

Unusable products, unless they can be recycled, transferred to someone who can utilize the material or returned to the supplier, constitute waste materials subject to solid waste and/or hazardous waste regulations. It is recommended that such waste materials be disposed of in accordance with applicable regulations and state law.

Trash and Rubbish Accumulation

General trash and rubbish is accumulated during normal working operations activities. Several of the facilities had the trash intermixed with recycled material stockpiles, inhibiting recycling activities and trash disposal. As a Good Management Practice, it is suggested that MDOT personnel place recyclable materials in the appropriate recycling stockpile or dumpster for disposal as they are generated.

Recyclable Materials

Recyclable materials (used lead/acid batteries, paper, and scrap metal) are generated at all of the facilities. Adopting and enforcing appropriate procedures for accumulating and recycling these materials are imperative. As long as these materials are appropriately recycled, potential hazardous wastes do not count in total volumes related to RCRA volume quotas. Recyclable materials should be removed from the facilities at regular intervals.

Scrap Metal Management

In general, scrap metal is only generated in any significant volume at the Central Lab. Each district facility generally handled scrap metal by using the District Complex metal recycling program.

Non-Storm / Waste Water Discharges

NPDES permits may be required for non-storm water sources which discharge to surface waters. One example would be equipment cleaning operations. MDEQ uses enforcement discretion in such situations. For example, limited washing/cleaning activities where conventional detergents are used (no solvents) and where the wash water “soaks into ground” would probably not require an NPDES permit. However, an operation which discharges a “point source” flow to a drainage ditch (or other surface water body) would require a permit.

All the facilities discharge to POTWs currently and do not require permits. However, if the municipalities require, in the future, limits then the affected facilities will have to find solutions to meet the requirements. The waste water at the Central Lab enters the POTW after passing thru a sump and separator that is maintained by MDOT’s Facility Records Management Division. Central Lab personnel should coordinate efforts with Facility Records Management Division in maintaining and operating the sump and separator.

Transformers

According to MDOT personnel, all transformers on MDOT property are owned by the power company supplying the electricity.

Air Emissions

All facilities have air emissions associated with indoor air handling to control particulates. The district facilities have control devices which occasionally have issues with handling the loads. The problems possibly associated with the systems are undersized motor or fan and/or the resistance in the duct work does not allow the flow to be optimal. The Fifth District Materials Laboratory is having extreme issues with their system being able to remove particulates from the building. A redesign of the system(s) may be eventually needed.

The Central Laboratory does have emissions that contain volatile organic compounds, but at this time is unregulated by MDEQ due to laboratories being exempt from permitting requirements.

Section 3

SECTION 3: HEALTH & SAFETY AUDIT REPORT

Overview

Thompson Engineering was contracted by the Mississippi Department of Transportation, to conduct health and safety audits of the Central Materials Laboratory and the six District Laboratories. These audits were conducted on March 13 thru 16, 2012. The major recommendation is the establishment of a Chemical Hygiene Plan for each facility. A Chemical Hygiene Plan is an OSHA requirement for laboratories that handle chemicals. The chemicals at the Central Lab are numerous, and less so at the district level. A Chemical Hygiene Plan is a written lab specific safety standard which addresses the policies, standard operating procedures, etc., to assure employees are protected from harm due to chemicals. In addition to the Chemical Hygiene Plan, the Hazard Communication system (MSDS) is out of date and should be brought up to the newest standard, which is currently the OSHA's Globally Harmonized System (GHS) of Classification and Labeling of Chemicals. The GHS is a system for standardizing and harmonizing the classification and labeling of chemicals. It is a logical and comprehensive approach to defining health, physical and environmental hazards of chemicals; creating classification processes that use available data on chemicals for comparison with the defined hazard criteria; and communicating hazard information, as well as protective measures, on labels and Material Safety Data Sheets (MSDS). Thompson Engineering would be able to assist MDOT Materials Division in creating those systems.

The following audit findings and recommendations are located in Attachment A.

Section 4

Section 4: Environmental Management Plan Summary

The Environmental Management Plan (EMP) for the MDOT Materials Laboratories is a comprehensive system for managing waste streams produced by the labs. The system functions by a guidance document supplied in Attachment B. Much of the EMP was developed out of the existing MDOT Maintenance Environmental Standard Operating Procedures. The EMP provides information on how employees should perform daily operations and proper handling of waste streams. In conjunction with the EMP guide is a compliance tracking tool developed in SharePoint in which documents, such as reports, plans and permits, can be stored. The compliance tracking tool also serves as the system in which deficiencies discovered in monthly and annual audits are remedied by corrective actions that can be monitored by their status and indicate the overall effect the EMP is having on certain areas of the MDOT Materials Labs. The monthly audits can be performed by MDOT Materials lab personnel using the inspection checklists supplied in the EMP Guide or by an external source. The annual audits should be performed by a third party to check for inconsistencies between monthly audit inspections and the actual status of the facility.

The EMP Guide is located in Attachment B.

Section 5

Section 5: Compliance Tracking

In order to facilitate the ongoing needs of the Environmental Management Program, Thompson Engineering developed a tracking system based in SharePoint. All documentation, training, permitting requirements and corrective actions identified at all the facilities can be stored on the site and retrieved by individuals that require the information.

Thompson Engineering will provide access and training to all individuals identified by MDOT as those needing read only access and those with the authority to upload or change documents. The SharePoint site can be modified to meet the needs of MDOT Materials Labs, as those needs or desires become apparent. MDOT may elect to adopt the SharePoint Site and has developed electronic inspection forms for the Maintenance Division Environmental Management Program.

Section 6

Section 6: Conclusions and Recommendations

Thompson Engineering has completed the development and implementation of the Laboratory Environmental Management Plan. Environmental audits of the Central Laboratory and the District Laboratories have been performed and were used to draft the EMP. In addition, a safety audit was also performed to identify potential safety issues and concerns.

Thompson Engineering suggests that continued efforts be made in the following issues discovered during the site visits. Thompson Engineering can provide assistance in finding solutions to these identifiable issues.

- Establish an up to date Chemical Hygiene Plan, specific to each facility, which should include accurate MSDS's and labels on all materials/chemicals used in the facilities.
- Characterize and dispose of all unwanted, unneeded, and unusable materials, specifically the items in the Chemical Storage Room located at the Central Lab.
- As a key component of the EMP, MDOT should perform monthly inspections of each facility and an annual third party inspection of all Materials Laboratories and their operations.
- Replace or redesign the air handling system located at the Fifth District Materials Laboratory.
- Continue to develop and refine the paraffin test rather than the mercury based test for all laboratories. Until mercury testing methods are completely phased out employees should follow proper handling procedures and have access to adequate spill control equipment.
- Inspect fire extinguishers on a monthly basis and ensure that they are unobstructed.
- Place adequate guards and warnings on equipment and locations where employee safety may be jeopardized.
- Store and consume food and drink outside of work areas.
- Install adequate GFCI in the Central Materials Laboratory.
- Maintain good housekeeping practices at all facilities.

Attachment A

**Safety
Summary
Chart**

Safety and Health Audit Findings

Central Materials Laboratory - Jackson MS

Geo-Tech Laboratory

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however, they are not being inspected monthly by an in house inspector.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing and are properly pressured. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: An employee was observed adding soil to the proctor machine while it was operating, which could have resulted in his hand being injured in a pinch point. There do not appear to be adequate guards and safety procedures in place for the use of testing equipment such as compression and proctor test equipment. Guards are needed to protect employees from injury during use, and procedures are needed to emphasize the safe use of these machines, and also for use in training new employees.

Recommendation 2: Evaluate all testing equipment to assure proper guarding is in place, and prepare and use simplified safe operating procedures for each of these pieces of equipment and for any other equipment that has the potential to injure an employee.

Finding 3: The masonry saw electrical cord plug had been repaired with electrical tape, and the repair condition did not appear to return it to its original use condition.

Recommendation 3: Have the cord repaired by an electrician or replace the cord.

Finding 4: The sign-in sheet for use of mercury during testing had not been used since March of 2011.

Recommendation 4: If the use of mercury is going to continue, the sign-in procedure should be followed each time it is used.

Finding 5: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 5: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Physical Laboratory

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however, they are not being inspected monthly by an in house inspector.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing and are properly pressured. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: There do not appear to be adequate guards and safety procedures in place for the use of testing equipment such as cylinder compression and steel test equipment. Guards are needed to protect employees from injury during use, and procedures are needed to emphasize the safe use of these machines, and also for use in training new employees.

Recommendation 2: Evaluate all testing equipment to assure proper guarding is in place, and prepare and use simplified safe operating procedures for each of these pieces of equipment and for any other equipment that has the potential to injure an employee.

Finding 3: Dusting in this lab appeared to be heavy.

Recommendation 3: Evaluate levels of dusting and install local ventilation system as needed to prevent employee over exposure to dust inhalation.

Finding 4: Evidence of employee eating and drinking in the lab area was observed.

Recommendation 4: Restrict employee eating and drinking to the appropriate break room. Move refrigerator and micro-wave oven to break room.

Finding 5: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 5: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Concrete Laboratory

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however, they are not being inspected monthly by an in house inspector.

Recommendation 2: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing and are properly pressured. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 3: There do not appear to be adequate guards and safety procedures in place for the use of testing equipment such as concrete cylinder break test equipment. Guards are needed to protect employees from injury during use, and procedures are needed to emphasize the safe use of these machines, and also for use in training new employees.

Recommendation 3: Evaluate all testing equipment to assure proper guarding is in place, and prepare and use simplified safe operating procedures for each of these pieces of equipment and for any other equipment that has the potential to injure an employee.

Finding 4: Dusting in this lab appeared to be heavy.

Recommendation 4: Evaluate levels of dusting and modify local ventilation system as needed to prevent employee over exposure to dust inhalation.

Finding 5: Evidence of employee eating and drinking in the lab area was observed.

Recommendation 5: Restrict employee eating and drinking to the appropriate break room.

Finding 6: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 6: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Receiving/Loading dock

Finding 1: The receiving/loading dock does not have fall protection warning or guarding to help prevent someone from falling to the ground below.

Recommendation 1: Evaluate the dock, and install appropriate guard chains and or rails, or paint yellow warning stripe at edge of dock.

Asphalt Laboratory

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however, they are not being inspected monthly by an in house inspector.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing and are properly pressured. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: There do not appear to be adequate guards and safety procedures in place for the use of equipment such as the hot plate. Guards and/or warning signs are needed to protect employees from injury during use.

Recommendation 2: Evaluate the hot plate to assure proper guarding is in place, and/or use signage to warn employees of heat danger.

Finding 3: Evidence of employee eating and drinking in the lab area was observed. Food was also found in the chiller.

Recommendation 3: Restrict employee eating and drinking to the appropriate break room.

Finding 4: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 4: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Chemical Laboratory

Finding 1: There was no Chemical Hygiene Plan in place

Recommendation 1: Prepare and implement a Chemical Hygiene Plan, as required by the OSHA Lab Standard.

Finding 2: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however, they are not being inspected monthly by an in house inspector.

Recommendation 2: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing and are properly pressured. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 3: Evidence of employee eating and drinking in the lab area was observed.

Recommendation 3: Restrict employee eating and drinking to the appropriate break room. Move refrigerator and micro-wave oven to break room.

Finding 4: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 4: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Finding 5: There was clutter obstructing access to the eye wash station

Recommendation 5: Remove clutter from around the eye wash station and train employees to keep the area accessible at all times.

Finding 6: There were numerous electrical outlets in the vicinity of sinks that did not appear have Ground Fault Circuit Interruption (GFCI) protection.

Recommendation 6: Evaluate the electrical system in the lab to whether GFCI protection is present, and if not, install adequate GFCI.

Atomic Absorption Testing Room

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however, they are not being inspected monthly by an in house inspector.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing and are properly pressured. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 2: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Finding 3: There were electrical outlets in the vicinity of sinks that did not appear to have Ground Fault Circuit Interruption (GFCI) protection.

Recommendation 3: Evaluate the electrical system in the lab to determine if there is or is not GFCI protection, and if not, install adequate GFCI.

Paint Testing Room

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however, they are not being inspected monthly by an in house inspector.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing and are properly pressured. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 2: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Finding 3: There were electrical outlets in the vicinity of sinks that did not appear to have Ground Fault Circuit Interruption (GFCI) protection.

Recommendation 3: Evaluate the electrical system in the lab to determine if there is or is not GFCI protection, and if not, install adequate GFCI.

Cement Laboratory

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however, they are not being inspected monthly by an in house inspector.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing and are properly pressured. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 2: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Finding 3: There were electrical outlets in the vicinity of sinks that did not appear to have Ground Fault Circuit Interruption (GFCI) protection.

Recommendation 3: Evaluate the electrical system in the lab to determine whether GFCI protection is present, and if not, install adequate GFCI.

Finding 4: Evidence of employee eating and drinking in the lab area was observed.

Recommendation 4: Restrict employee eating and drinking to the appropriate break room. Move refrigerator to break room.

District One Materials Laboratory – Tupelo, MS

Soils Laboratory

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however, they are not being inspected monthly by an in house inspector. One extinguisher was also obstructed from employee access.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing, are properly pressured and there are no obstructions. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: An employee was observed using a soils grinder without wearing appropriate eye protection.

Recommendation 2: Evaluate hazards of all equipment, and prepare and use simplified safe operating procedures for all equipment that has the potential to injure an employee.

Finding 3: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 3: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Asphalt Lab

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however, they are not being inspected monthly by an in house inspector.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing, are properly pressured and there are no obstructions. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: There do not appear to be adequate safety procedures in place for the use of testing equipment such as the Troxler.

Recommendation 2: Evaluate hazards of all equipment, and prepare and use simplified safe operating procedures for all equipment that has the potential to injure an employee.

Finding 3: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated. Unlabeled secondary chemical containers were observed. These are containers that are not the original container the material came packaged with, but a smaller, easier distributed container that employees have utilized in their operations. All containers should be labeled.

Recommendation 3: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Receiving/Loading dock

Finding 1: The receiving/loading dock does not have fall protection warning or guarding to help prevent someone from falling to the ground below.

Recommendation 1: Evaluate the dock, and install appropriate guard chains and or rails, or paint yellow warning stripe at edge of dock.

District Two Materials Laboratory - Batesville, MS

Soils Laboratory

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however, they are not being inspected monthly by an in house inspector. One extinguisher was also obstructed from employee access.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing, are properly pressured and there are no obstructions. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: Housekeeping is poor.

Recommendation 2: Train employees to keep their work areas clean and organized at all times.

Finding 3: Dusting in this lab appeared to be heavy around the gravel shaker.

Recommendation 3: Evaluate levels of dusting and improve ventilation system as needed to prevent employee over exposure to dust inhalation.

Finding 4: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 4: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Asphalt Laboratory

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however, they are not being inspected monthly by an in house inspector.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing, are properly pressured and there are no obstructions. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 2: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Receiving/Loading dock

Finding 1: The receiving/loading dock does not have fall protection warning or guarding to help prevent someone from falling to the ground below.

Recommendation 1: Evaluate the dock, and install appropriate guard chains and or rails, or paint yellow warning stripe at edge of dock.

District Three Materials Laboratory - Yazoo City, MS

Soils Laboratory

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however, they are not being inspected monthly by an in house inspector.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing, are properly pressured and there are no obstructions. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: There do not appear to be adequate guards and safety procedures in place for the use of testing equipment such as the proctor machine, aggregate gradation machine and the soils grinder. Guards are needed to protect employees from injury during use, and procedures are needed to emphasize the safe use of these machines, and also for use in training new employees.

Recommendation 2: Evaluate all testing equipment to assure proper guarding is in place, and prepare and use simplified safe operating procedures for each of these pieces of equipment and for any other equipment that has the potential to injure an employee.

Finding 3: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 3: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Asphalt Laboratory

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however they are not being inspected monthly by an in house inspector.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing, are properly pressured and there are no obstructions. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: There do not appear to be safety adequate procedures in place for the use of testing equipment.

Recommendation 2: Evaluate hazards of all equipment, and prepare and use simplified safe operating procedures for all equipment that has the potential to injure an employee.

Finding 3: The emergency eye wash station is broken.

Recommendation 3: Repair and inspect monthly.

Finding 4: Evidence of employee eating and drinking in the lab area was observed.

Recommendation 4: Restrict employee eating and drinking to the appropriate break room. Move coffee maker to the employee break room.

Finding 5: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated. .

Recommendation 5: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Concrete Laboratory

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however they are not being inspected monthly by an in house inspector.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing, are properly pressured and there are no obstructions. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: Evidence of employee eating and drinking in the lab area was observed.

Recommendation 2: Restrict employee eating and drinking to the appropriate break room. Move food stuffs to the employee break room refrigerator.

Finding 3: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 3: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Receiving/Loading Dock

Finding 1: The receiving/loading dock does not have fall protection warning or guarding to help prevent someone from falling to the ground below.

Recommendation 1: Evaluate the dock, and install appropriate guard chains and or rails, or paint yellow warning stripe at edge of dock.

District Five Materials Laboratory - Newton, MS

Soils Laboratory

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however they are not being inspected monthly by an in house inspector.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing, are properly pressured and there are no obstructions. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: There do not appear to be adequate guards and safety procedures in place for the use of testing equipment such as the proctor machine. Guards are needed to protect employees from injury during use, and procedures are needed to emphasize the safe use of these machines, and also for use in training new employees.

Recommendation 2: Evaluate all testing equipment to assure proper guarding is in place, and prepare and use simplified safe operating procedures for each of these pieces of equipment and for any other equipment that has the potential to injure an employee.

Finding 3: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 3: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Asphalt Laboratory

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however they are not being inspected monthly by an in house inspector.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing, are properly pressured and there are no obstructions. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: There do not appear to be adequate safety procedures in place for the use of testing equipment.

Recommendation 2: Evaluate hazards of all equipment, and prepare and use simplified safe operating procedures for all equipment that has the potential to injure an employee.

Finding 3: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 3: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Drying Room

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however they are not being inspected monthly by an in house inspector.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing, are properly pressured and there are no obstructions. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: Evidence of employee eating and drinking in the lab area was observed.

Recommendation 2: Restrict employee eating and drinking to the appropriate break room. Move food stuffs, refrigerator and micro wave oven to the employee break room.

Finding 3: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 3: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Shaker Room

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however they are not being inspected monthly by an in house inspector.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing, are properly pressured and there are no obstructions. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: There do not appear to be adequate guards and safety procedures in place for the use of testing equipment such as the shaker machine. Guards are needed to protect employees from

injury during use, and procedures are needed to emphasize the safe use of these machines, and also for use in training new employees.

Recommendation 2: Evaluate all testing equipment to assure proper guarding is in place, and prepare and use simplified safe operating procedures for each of these pieces of equipment and for any other equipment that has the potential to injure an employee.

Finding 3: Dusting in this lab appeared to be heavy around the shaker.

Recommendation 3: Evaluate levels of dusting and improve ventilation system as needed to prevent employee over exposure to dust inhalation

Finding 4: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 4: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Receiving/Loading Dock

Finding 1: The receiving/loading dock does not have fall protection warning or guarding to help prevent someone from falling to the ground below.

Recommendation 1: Evaluate the dock, and install appropriate guard chains and or rails, or paint yellow warning stripe at edge of dock.

District Six Materials Laboratory - Hattiesburg, MS

Soils Laboratory

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however, they are not being inspected monthly by an in house inspector.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing, are properly pressured and there are no obstructions. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: There do not appear to be adequate safety procedures in place for the use of testing equipment.

Recommendation 2: Evaluate hazards of all equipment, and prepare and use simplified safe operating procedures for all equipment that has the potential to injure an employee.

Finding 3: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 3: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Asphalt Laboratory

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however they are not being inspected monthly by an in house inspector.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing, are properly pressured and there are no obstructions. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: There do not appear to be adequate guards and safety procedures in place for the use of testing equipment, such as the asphalt extruder. Guards are needed to protect employees from injury during use, and procedures are needed to emphasize the safe use of these machines, and also for use in training new employees.

Recommendation 2: Evaluate all testing equipment to assure proper guarding is in place, and prepare and use simplified safe operating procedures for each of these pieces of equipment and for any other equipment that has the potential to injure an employee.

Finding 3: The hot work gloves are too short.

Recommendation 3: Replace with full forearm protection gloves.

Finding 4: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 4: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Concrete Laboratory

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however they are not being inspected monthly by an in house inspector. One extinguisher is obstructed by a door.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing, are properly pressured and there are no obstructions. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: One of the guards on the grinding wheel is missing, and the other is old and cannot be seen through.

Recommendation 2: Replace the guards.

Finding 3: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 3: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Aggregate Room

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however they are not being inspected monthly by an in house inspector. One of the extinguishers is obscured.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing, are properly pressured and there are no obstructions. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: There do not appear to be adequate safety procedures in place for the use of testing equipment.

Recommendation 2: Evaluate hazards of all equipment, and prepare and use simplified safe operating procedures for all equipment that has the potential to injure an employee.

Finding 3: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 3: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Receiving/Loading Dock

Finding 1: The receiving/loading dock does not have fall protection warning or guarding to help prevent someone from falling to the ground below.

Recommendation 1: Evaluate the dock, and install appropriate guard chains and or rails, or paint yellow warning stripe at edge of dock.

District Seven Materials Laboratory - McComb, MS

Soils Laboratory

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however, they are not being inspected monthly by an in house inspector. One extinguisher was also obstructed from employee access.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing, are properly pressured and there are no obstructions. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: Evidence of employee eating and drinking in the lab area was observed.

Recommendation 2: Restrict employee eating and drinking to the appropriate break room. Move food stuffs and micro wave oven to the employee break room.

Finding 3: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 3: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Asphalt Laboratory

Finding 1: The fire extinguishers appear to be adequate in number and placement and are up to date on their annual inspection; however they are not being inspected monthly by an in house inspector. One extinguisher was obstructed from employee access.

Recommendation 1: Assign someone to inspect the fire extinguishers monthly, to assure that they are intact, not missing, are properly pressured and there are no obstructions. The inspector should then initial and date the appropriate box on each extinguisher inspection card.

Finding 2: There do not appear to be adequate safety procedures in place for the use of testing equipment.

Recommendation 2: Evaluate hazards of all equipment, and prepare and use simplified safe operating procedures for all equipment that has the potential to injure an employee.

Finding 3: Evidence of employee eating and drinking in the lab area was observed.

Recommendation 3: Restrict employee eating and drinking to the appropriate break room. Move coffee maker and refrigerator to the employee break room.

Finding 4: There is a Hazardous Communication system in place, (MSDS), but it needs to be updated.

Recommendation 4: Review OSHA's Globally Harmonized System of Classification and Labeling of Chemicals, published on March 26, 2012 to replace the existing Hazard Communication standard, and comply with its requirements.

Receiving/Loading Dock

Finding 1: The receiving/loading dock does not have fall protection warning or guarding to help prevent someone from falling to the ground below.

Recommendation 1: Evaluate the dock, and install appropriate guard chains and or rails, or paint yellow warning stripe at edge of dock.

Attachment B

MDOT LABORATORY ENVIRONMENTAL MANAGEMENT PLAN (EMP) GUIDE
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PURPOSE: To establish a policy and procedure for the identification and control of environmental issues at certain Mississippi Department of Transportation (MDOT) Materials Laboratory Facilities including the Central Materials Laboratory and the District Materials Laboratories; to train MDOT Materials Laboratory Personnel to recognize potential environmental issues and the appropriate responses to these issues; and to establish an Environmental Inspection Program for certain MDOT facilities to assure continual compliance with environmental rules, regulations and statutes.

A. STATEMENT OF POLICY

The Mission of MDOT is to provide a safe intermodal transportation network that is planned, designed, constructed and maintained in an effective, cost efficient, and environmentally sensitive manner. There are numerous United States and State of Mississippi laws that provide regulatory authority which are enacted for the protection of the environment. A list of laws and regulations relating to environmental matters is provided in this section. The Mississippi Transportation Commission (MTC) intends to provide a basis for the protection of the environment, pursuant to applicable laws and regulations, and requires that this document be provided as guidance for compliance with these potentially applicable laws and for the protection of the environment.

Potentially Applicable Laws and Regulations

United States Codes (U.S.C.):

| | |
|----------------|---|
| 33 U.S.C. 1251 | Clean Water Act |
| 33 U.S.C. 1401 | Marine Protection, Research, Sanctuaries Act of 1972 as amended (16 USC1431) |
| 42 U.S.C. 300f | Safe Drinking Water Act |
| 42 U.S.C. 4371 | National Environmental Policy Act of 1969 (NEPA) as amended by Environmental Quality Improvement Act of 1970 |
| 42 U.S.C. 6901 | Resource Conservation and Recovery Act |
| 41 U.S.C. 9601 | Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) as amended by Superfund Amendments Re-authorization Act (SARA) |

State of Mississippi Environmental Laws (as amended):

| | |
|---------------|-------------------------------------|
| 49-2-(1-25) | Department of Environmental Quality |
| 17-17- (1-57) | Solid Waste Disposal Law of 1974 |

49-17-(1-43)
49-17-(410-433)
53-7-1

Air and Water Pollution Control Act
Underground Storage Tank Act of 1988
Mississippi Surface Mining and Reclamation Act

Code of Federal Regulations (CFR):

| | |
|-----------------|---|
| 29 CFR 1910.120 | OSHA Hazard Communications |
| 40 CFR 110 | Discharge of Oil |
| 40 CFR 112 | Oil Pollution Prevention |
| 40 CFR 116 | Designation of Hazardous Substances |
| 40 CFR 117 | Determination of Reportable Quantities for Hazardous Substances |
| 40 CFR 122 | The National Pollutant Discharge Elimination System |
| 40 CFR 260-270 | Hazardous Waste Regulations |
| 40 CFR 261 | Listed Hazardous Wastes |
| 40 CFR 262 | Standards Applicable to Generators of Hazardous Waste |
| 40 CFR 264 | Standards for Owners/Operators of Hazardous Waste Treat, Store, Disposal Facilities |
| 40 CFR 265 | Interim Standards for Owners/Operators of Hazardous Waste Treat, Store, Disposal Facilities |
| 40 CFR 273 | Standards for Universal Waste Management |
| 40 CFR 280 | Underground Storage Tanks |
| 40 CFR 355 | Emergency Planning and Notification |
| 40 CFR 372 | Toxic Chemical Releases |
| 49 CFR 171-195 | Department of Transportation, Hazardous Material Regulations |

B. STATEMENT OF RESPONSIBILITY

The State Materials Engineer or his/her designated person(s) shall be responsible for administering the various provisions of the SOP and setting policy for the Districts. In the event Permits are required in the future, they will be responsible for obtaining and maintaining any state and/or federal permits required for MDOT to operate laboratories and perform necessary testing. Adequate files and records associated with any environmental incident and the corrective actions shall be kept and made available for review by the appropriate authorities.

C. ENVIRONMENTAL MANAGEMENT FOR LABORATORY-BASED OPERATIONS

Items within this section provide guidance, practices and procedures on environmental issues for operations at MDOT Materials Laboratories; specifically the Central Laboratory and the District Laboratories.

1. General Housekeeping Practices:

General: There are daily activities at Materials Laboratory facilities that involve many different materials, which can be harmful to human health and the environment if misused, mishandled or mislabeled. These materials include herbicides, petroleum products, paints, asphalt products, cement, commercial cleaning products and solvents. Good housekeeping practices are required to reduce or eliminate the potential for discharge of pollutants to the environment by promoting efficient and safe storage, use, handling and the cleaning up of spilled materials. Good housekeeping practices can greatly reduce the quantities of waste material and decrease potential for employee exposure to potentially hazardous materials.

Practices: These Good Housekeeping Practices must be followed in order to maintain a safe and healthy work area while protecting the environment.

- Maintain clean and organized material and equipment storage areas.
- Use dry methods (rags, vacuuming or sweeping) for cleaning shop floor.
- Store chemicals and petroleum products inside or under cover and on an impervious surface to prevent exposure to rainfall.
- When possible store petroleum products on spill containment pads.
- Maintain waste and product fluids in leak proof and labeled containers, keeping the containers closed when not in use.
- Clean up spilled or leaking fluids immediately.
- Label all containers, including those used for temporary use.
- Store flammable products in flame resistant cabinets that conform to NFPA Code 30 and OSHA standards (OSHA 29 CFR 1910.106).
- Inspect unpaved areas of the facility for erosion and use vegetation to repair area.
- Solid waste receptacles/dumpsters should be water tight and the lid closed, when not in use.
- Solid waste receptacles/dumpsters must have the plug in place.
- Store materials away from areas which may drain to the storm water drainage system.

2. Waste Water Discharge

General: All the MDOT Materials Laboratories are connected to their local POTW and currently are not required to obtain any additional permitting (NPDES).

Discharges from drains to surface water or groundwater are regulated by the National Pollutant Discharge Elimination System (NPDES) and require a NPDES permit. These permits are issued by the Mississippi Department of Environmental Quality (MDEQ). In addition, direct discharges from drains to groundwater through leach fields or septic systems are not allowed. Floor drains may be connected to a sanitary sewer system which drains to a Publicly Owned Treatment Works (POTW). The POTW may have a pretreatment program or require a pretreatment permit to regulate discharges to the sanitary sewer.

Procedures: Check with the POTW and/or MDEQ to determine if a Pretreatment Permit is required. Such permits (issued typically only for large volume users >25,000 gallons/day) usually require fluids to pass through an oil/water separator before entering the POTW. (If a drain is already

connected to a POTW and MDOT does not have a Pretreatment Permit, it will be necessary to check with the POTW to determine what actions will need to be taken, if any.)

3. Spills of Petroleum or Hazardous Substances:

a. Containment and Clean-Up:

In the event of any spill, the first priority is to provide medical first aid and health/safety assistance to affected personnel. The individual or individuals first observing a spill should then take immediate actions to control the spill, if such actions are practical, taking into account personal safety.

In the case of all spills, handling of contaminated materials and/or attempting to stop releases, restrict all sources of ignition and wear appropriate PPE. When a spill does occur, the Material Safety Data Sheet (MSDS) should be consulted to determine appropriate personnel protection requirements.

After immediate actions have been taken to ensure personal safety, control the spill source, and contain the spill (if possible). Additional response actions, including cleanup and disposal options, will depend on specific factors associated with the incident, such as quantity and type of materials, whether it is contained on-site, and whether it poses imminent risks to human health or the environment.

Personnel immediately on the scene must act appropriately but not recklessly. Personnel should not enter into a situation involving imminent risk to human health or life. In all instances, common sense, good judgment, training, and experience should prevail.

The following are general steps to follow in the event of a petrochemical spill.

- Safety First
- Provide Assistance to Affected Personnel
- Contact the Supervisor

A Spill Response Procedures Flow Chart and Spill Reporting Form are attached.

(1) Minor Spills – Less than approximately 55 gallons of oil on-site and **not near or in a water body**

- Personal Protective Equipment: Employees should use, as needed, rubber or neoprene gloves, rubber high top boots or overshoes, long sleeve shirt, disposable coveralls, and full face shield or goggles.
- Spill Control Actions: Close off the entrance to any nearby surface or water drainage ditches/channels.
- Enclose spilled liquid with dike and absorb.
- Add absorbent material until no free liquids are evident and place into drums or garbage bags.

- Contact the State Materials Engineer, thru the proper chain of command, for disposal instructions.
- Complete a Spill Report Form and maintain on-site.

(2) Major Spills – Greater than 55 gallons **and/or off-site or into a water body**

- Employees should wear appropriate Personal Protective Equipment.
- Provide medical first aid and health/safety assistance to affected individuals and implement safety and spill control measures for the area (if practical, without further endangerment of additional personnel).
- Isolate the area from other activities, if necessary.
- Identify other potential hazards in the spill area, and remove or eliminate ignition sources.
- Eliminate the source of the spill or release (shut-off controls, valves, etc.), if it can be done safely.
- Contain the spill (for example using temporary berms, or diversion ditches) to as small an area as possible, and prevent it from leaving facility boundaries.
- Notify the appropriate person(s) and/or the next in command. The State Materials Engineer is responsible for regulatory agency notifications (if required), and to mobilize contract Emergency Response Contractor(s) if needed. Report any significant hazardous substance spill to the **24-hour State Warning Point at the Mississippi Emergency Management Agency (601) 352-9100 or 1-800-222-6362**. Spills of any pollutant, not just hazardous materials that may affect state waters, land, air, or public health must be reported.
- Disposal methods must be approved by the ADE-M.
- Prepare and submit after-incident reports.

A Spill Reporting Form must be completed for each spill, whether minor or major.

4. Storing and Handling of Products and Wastes

General: MDOT uses many types of products and generates several categories of wastes. MDOT is responsible for proper waste characterization, handling and disposal, and the requirements for handling and disposal vary for the different waste categories. Wastes generated by MDOT include construction and demolition (C&D) wastes, hazardous wastes, non-hazardous solid wastes, non-hazardous industrial or special wastes and recyclable waste materials.

Practices/Requirements: Good storage and handling practices of both products and waste materials can greatly minimize costs of handling and disposal as well as reduce potential for employee exposure or environmental contamination. The following are good practices that can significantly reduce handling, disposal costs, and future liability.

- Substitute a less hazardous or less waste-producing product or process for those that would otherwise have generated a more hazardous or higher quantity of wastes. An example is using a citrus-based asphalt release agent instead of diesel to clean tools and equipment or using a contract service to service parts washers rather than using MDOT owned parts washers with mineral spirits.
- Identify container contents and maintain data on its contents: Keep products in their original containers whenever possible. Otherwise, label containers with permanent markers, include the date when you first began filling it, and keep a record of what is stored in each one. Retain the material safety data sheets (MSDS) for the product. Also record any other information that relates to a waste, such as "also contains some water" or what activity the waste resulted from, such as "Safe-Strip cleaning solvent from epoxy pavement marking activities".
- Whenever possible, return unused products to the supplier. Some suppliers and manufacturers will accept unused, expired products. This eliminates the need to pay for disposal in some cases.
- Never mix dissimilar materials and wastes in the same containers: Mixing of different materials will likely require the resulting mixture to be analytically tested and may present increased disposal restrictions. Environmental regulations also place strict limits on the types of wastes that can be mixed together and generally prohibit mixing dissimilar wastes.
- Store drums in a protected (dry) and temperature-compatible manner. Do not store product or empty drums upright and outdoors where they can collect precipitation, allowing for collection of water (and the potential need for testing of rainwater) in the drums and degradation (even when a lid is originally in place). Rather, store all drums under a roof, if possible, and store uncovered empty drums on their sides. Avoid storing materials that can freeze in unheated areas.
- Don't let wastes or empty containers accumulate; dispose of them regularly: Dispose of wastes before knowledge of their contents is lost and before deterioration occurs. Keep an inventory of the waste you have on hand and contact the ADE-M to set up disposal contracts for both hazardous and non-hazardous wastes. Dispose of empty containers promptly before water or other contamination or deterioration occurs.

a. Hazardous Wastes

The EPA regulates the management of hazardous wastes through the Resource Conservation and Recovery Act (RCRA). The State of Mississippi has been given authority from the EPA to administer its hazardous waste management program and Mississippi has adopted the federal hazardous waste regulations in full by reference.

A determination of whether a waste is a hazardous waste as described under "Hazardous Wastes" below should be conducted for all wastes that could possibly be hazardous wastes. The hazardous waste determination may be conducted by using generator's knowledge of the waste and/or testing. The product's Material Safety Data Sheet (MSDS) or product label should indicate if an unused product would be a

hazardous waste. Information such as ingredients, flash point, pH and disposal requirements are useful in assisting to make this determination.

Used materials must also consider the contaminants and/or changes to the material that could have been introduced during its use. This type of contamination may not be easily predicted by generators knowledge and may require testing of the typical waste product. Examples could include metal contamination in waste oils, degreasing solvents, or antifreeze that could be added during the vehicle operation that were not present in the virgin product.

Hazardous waste determination: Generators must determine if their wastes are hazardous wastes. It must be determined if the waste is a "listed waste" and/or has a "hazardous waste characteristic". (The complete requirements for Identification and Listing of Hazardous Wastes are at 40 CFR Part 271)

- (1) Listed wastes - Commercial products, off-specification products, container residues and spill residues of chemicals that are specifically "listed" are hazardous wastes when discarded. Examples would include unused toluene or methanol for thinning paints. These would include the commercial/ technical grade formulation of the product or products for which a listed chemical is the sole active ingredient. (Note: Products are not listed hazardous wastes merely because they contain a listed ingredient in a mixture). Certain process wastes from certain types of industrial/maintenance activities may also be "listed". Example includes: spent degreasing solutions containing certain components such as chlorinated solvents.

Listed hazardous wastes also include acute hazardous wastes which have additional requirements including designation of a generator as large quantity if > 2.2 lbs. is generated within any month. Acute hazardous wastes are not anticipated within MDOT activities, the additional requirements are not detailed.

- (2) Characteristic wastes - Wastes that have certain "characteristics" (ignitability, corrosivity, reactivity, and/or toxicity) are hazardous wastes regardless of their origin.
 - (A) Ignitable - Can it catch fire easily? (Defined for liquids as having a flashpoint below 140°. Some parts washer solvents and waste gasoline are hazardous wastes because they have the characteristic of ignitability.
 - (B) Reactive - Will it explode or react violently when exposed to air or water? (Not a common waste for MDOT).
 - (C) Corrosive - Will the material dissolve steel or harm skin? (Defined as pH < 2 or > 12.5).
 - (D) Toxicity - This characteristic does not solely consider that the constituents are present, but whether they have the tendency to "leach" out and release into the environment upon disposal as measured by a test termed the Toxicity Characteristic Leaching Procedure (TCLP).

The TCLP is an analytical test which determines the potential of a toxic constituent (currently 40 constituents: metal, pesticide, and organic chemicals) to "leach" and become mobile and contaminate groundwater/waters upon disposal. Metals such as lead and chromium, and possibly benzene (a volatile organic) are the constituents on the TCLP list that most frequently are present in MDOT wastes. Lead based paint waste, with the characteristic of toxicity, removed from bridges is one of MDOT's most frequently generated hazardous wastes.

Hazardous waste generator categories and requirements: Generators must determine how much hazardous waste they generate and maintain records to document the amounts. The categories are:

- (1) Large Quantity Generators (LQG) are fully regulated and generate > about 2,200 pounds or 300 gallons in any month or store more than 13,200 lbs on site at any one time (or > 2.2 lbs. /month acute hazardous wastes).
- (2) Small Quantity Generators (SQG) have somewhat reduced requirements and generate between 220 and 2,200 pounds or about 25 to under 300 gallons and store less than 13,200 lbs. on site at any one time.
- (3) Conditionally Exempt Small Quantity Generators (CESQG) have significantly reduced requirements and generate < 220 pounds or about 25 gallons/month and store < 2,200 pounds or 330 gallons on site at any one time.

Storage, handling and record keeping requirements vary based on the amount of hazardous waste generated at a facility. MDOT facilities will strive to maintain a CESQG status. The requirements of this category are:

- (1) Identify all hazardous waste generated
- (2) Dispose of the waste at a facility approved to accept the hazardous waste
- (3) Never accumulate more than 2,200 pounds of hazardous waste on-site

For other than CESQG facilities, hazardous wastes must be:

- (1) Properly packaged and labeled as hazardous waste and with words describing the waste.
- (2) Inspected at least weekly while stored on site.
- (3) Shipped by a permitted waste transporter with a hazardous waste manifest.
- (4) Disposed of at a permitted treatment/disposal facility for hazardous wastes.
- (5) Removed within 90 days for LQGs and 180 days (270 days if it must be shipped more than 200 miles) for SQG.
- (6) Maintain records for employee training, inspections, shipping, transport and disposal of wastes.

Since storage is allowed without a permit only at the site of generation, hazardous wastes cannot be moved to other storage locations. Facilities may periodically change generator categories based on disposal needs.

b. Universal Wastes

Universal Wastes are widely generated, potentially hazardous wastes, such as mercury containing equipment (switches, gages), pesticides, thermostats, nickel-cadmium and small lead-acid batteries, lamps (fluorescent, high intensity discharge, neon mercury vapor and metal halide lamps.). The EPA regulates universal waste through RCRA, and applicable federal regulations are in 40 CFR 273. The regulations have stream-lined requirements for:

- Notification
- Labeling
- Accumulation Times
- Employee Training
- Response to Releases
- Off-site Shipping, Tracking and Transportation (allows use of common carriers)

Organizations and businesses which accumulate less than 220 lbs of universal wastes per month are considered Conditionally Exempt Small Quantity Generators (CESQG) of universal wastes under 40 CFR 273.8. CESQGs can dispose of Universal Wastes in an approved solid waste landfill.

MDOT Materials Laboratory facilities are considered CESQGs, and as such are exempt from the Universal Waste regulations. However, future requirements may mandate compliance with these regulations.

c. Non-hazardous Solid Wastes

The EPA also regulates the management of solid wastes through RCRA. Applicable federal regulations are in 40 CFR 241-258.

In addition to the federal regulations, the Mississippi Solid Waste Law establishes minimum criteria for solid waste management facilities. Applicable regulations are identified in SW-2, Mississippi Non-hazardous Solid Waste Management Regulations and Criteria.

Solid waste, as defined by RCRA, is a discarded, abandoned, or otherwise inherently waste-like material that has not been specifically excluded from regulation. Routine garbage, office trash, and most collected litter are considered non-hazardous wastes. Also, many materials that are collected for recycling are considered solid waste. The RCRA definition of solid waste may include solids, liquids, semi-solids or contained gaseous materials.

Non-hazardous wastes (except those that are segregated for recycling) shall be collected in dumpster-type containers. Containers should be emptied a minimum of once a week. Collected wastes should be transported to an off-site Class A or municipal sanitary landfill for disposal.

d. Non-hazardous Industrial Wastes

Some wastes do not meet any criteria for definition as a hazardous waste, but result from work activities and are considered industrial-commercial wastes. Industrial commercial wastes are disposed of at municipal/commercial disposal facilities, similar to routine non-

hazardous solid waste, at recycling facilities and at specialized facilities for that type of waste. Examples of non-hazardous industrial wastes that MDOT may have include:

- Paint and paint chips that do not contain any regulated RCRA metals or that do not fail the TCLP test. This also includes millings of traffic markings and adhering road material when markings are purposely removed from pavement.
 - Non-hazardous used oil.
 - Contaminated soil.
 - Unused products containing chemicals (that are not hazardous wastes).
 - Empty drums/containers for disposal, not recycling (which is the preferred method of handling).
- (1) Construction and Demolition (C&D) debris for disposal in Class I Rubbish Landfills: Uncontaminated solid waste resulting from construction, remodeling, repair and demolition may be disposed of at permitted Class I Rubbish Landfills, which have less stringent regulatory requirements, or may be disposed of at municipal solid waste landfills. Some types of C&D wastes have additional options as outlined below under “Beneficial Re-use C&D Wastes. Permitted Class I Rubbish Landfills can accept the following types of wastes:
- Construction and demolition debris (wood and metal)
 - Brick, mortar, concrete, stone, and asphalt
 - Cardboard
 - Appliances (excluding refrigerators and air conditioners) with motor removed
 - Furniture
 - Plastic, glass
 - Sawdust, wood chips and shavings
- (2) Class II Rubbish Landfills: Some types of C&D wastes have an additional disposal option in a Class II Rubbish Landfill as follows:
- Recognizable (unprocessed) uncontaminated concrete and other masonry waste (including steel or fiberglass reinforcing embedded in concrete), asphalt pavement, brick, soil or rock that has not been in contact with a spill from a petroleum product, hazardous waste, or industrial waste, and that is not commingled with any other solid waste may be handled at an approved Class II Rubbish Landfill. If other wastes get mixed into the materials listed above, the entire area may be considered an illegal landfill and cleanup and removal of everything may be required.
- (3) Beneficial Use of C&D Wastes
- Certain C&D wastes may be used as beneficial fill to level an area, to control erosion, or for landscaping or improvements to other facilities. These

materials include uncontaminated concrete, asphalt and rock. Use of C&D wastes will be approved at the discretion of the Materials Engineer in charge of the facility.

(4) Wastes Included for Disposal in Municipal Solid Waste (Subtitle D) Landfills

The following are wastes which are generally accepted by Municipal Solid Waste Landfills:

- Household wastes
- Commercial solid wastes
- Non-hazardous sludge
- Fertilizer and certain agricultural chemicals
- Plastics and resins
- Pulp and paper waste

Landfills may require sampling and analysis of a waste before acceptance.

e. Recyclable Materials

Proper handling of certain materials allows them to be considered recyclable materials. Several solid waste and hazardous waste streams generated by MDOT are currently recycled:

- (1) Used Batteries: Requirements vary for batteries dependent upon their type and content and may require specialty recycling or disposal due to metal content or corrosiveness. The federal Battery Act of 1996 required the phase out of mercury in alkaline batteries and required the development of recycling

programs for nickel-cadmium, lead and certain other batteries. Review the information marked on the battery or provided with it and, unless supplier information indicates otherwise, handles by the following general guidelines:

- Lead Acid Batteries: Typically vehicle batteries and small sealed batteries in electronic equipment contain acid liquid and lead and must be recycled or disposed as hazardous waste. MS law requires retailers/distributors to accept used automotive/truck/RV batteries back for recycling at no charge (two per month maximum without new battery purchase). Turn in the old batteries when new batteries are installed. Licensed waste transporter, manifesting of shipment or inclusion of the battery quantities in site hazardous waste generation amounts and generator status calculations are not required.
- Nickel-Cadmium: Rechargeable batteries must be recycled or managed under the "Universal Waste Rule". The Rechargeable Battery Recycling Corporation (RBRC) at 800-8-BATTERY can provide assistance in recycling; alternatively, specialty waste disposal contracts could include the recycling of these batteries in their requirements.

- Nickel Metal Hydride: These batteries are not specifically required to be, but should also be similarly recycled.
- Silver Oxide and formerly available Mercuric Oxide batteries must also be recycled or disposed of as hazardous waste due to silver or mercury content, respectively.
- Alkaline and Carbon-Zinc Batteries: These batteries are now made with no intentionally added mercury and are considered acceptable for disposal as routine municipal waste.

Handling Procedures for Used Batteries:

- Store batteries awaiting recycling in a designated area, under cover and preferably on a plastic containment pallet suitable for containing any battery spillage.
 - Store batteries upright and do not stack batteries to prevent cracking
 - Batteries which are leaking or have damaged casings, may not be acceptable by the recycler and should be handled as a hazardous waste
 - If a battery is dropped resulting in a release, neutralize any spilled acid with baking soda or lime.
 - Limit the number of batteries stored on-site to one pallet.
- (2) Scrap Metal: Readily recyclable metal materials such as steel beams, guard rail, posts, cables and road signs should be recycled. Scrap metal should be maintained in an orderly manner, segregated from other materials and picked up on a routine schedule. Currently, only the Central Lab generates any significant quantity of scrap metal

f. Hazardous Materials/Material Safety Data Sheets (MSDSs)

Hazardous materials may be generally defined as products with Material Safety Data Sheets (MSDSs). MSDSs specify the hazards associated with such materials and also provide information related to storage, handling, use, and disposal of empty containers and residuals, and/or response to spills.

Regulatory requirements for maintaining MSDSs are a part of OSHA's Hazard Communication Standard (29 CFR 1910.1200), which requires employers that handle hazardous chemicals to inform employees about the chemical hazards they encounter in the workplace. Review of OSHA compliance was beyond the scope of these environmental audits. However, MSDSs provide useful information for environmental compliance considerations as well. For example, releases of reportable quantities (RQ's) of hazardous substances are required under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) regulations. Additionally, if extremely hazardous substances (EHS's) are maintained at a facility above Threshold Planning Quantities (TPQ's), regulations under the Emergency Planning and Community Right to Know Act (EPCRA) require notification to emergency response and local emergency planning agencies.

Suppliers and manufacturers are required to supply MSDSs for all products and they must be retained and available for all materials on site as part of a Hazard Communication (Hazcom) Program. The unused unmixed product in its original container typically does not need to be tested prior to disposal if you have a MSDS that properly identifies the material.

g. Chemical Spills – Containment and Clean-Up

Numerous federal and state regulations specify extensive requirements for the prevention of spills and leaks of hazardous wastes at state transportation facilities. In addition, many federal, state, and local agencies should be immediately notified of a hazardous waste release. Severe penalties and fines are often imposed for failure to notify the appropriate authority in the event of a chemical spill. The first and most important step in a spill or leak response is to safely contain the spill and stabilize the situation and then to notify the proper authorities.

Spill prevention and control procedures and practices are typically implemented to prevent and control spills in a manner that minimizes or prevents the discharge of spilled material to drainage systems or watercourses. Spill prevention and control procedures are typically implemented wherever chemicals and/or hazardous substances are stored. Substances may include, but are not limited to, soil stabilizers, dust palliatives (dust suppression agents such as asphalt emulsions), herbicides, growth inhibitors, fertilizers, de-icing chemicals, fuels, lubricants and other petroleum distillates. To the extent that the work can be accomplished safely, spills of oil, petroleum products, and sanitary and septic wastes should be contained and cleaned up immediately.

The following are general guidelines for spill clean-up:

- Safety First.
- Provide Assistance to Affected Personnel.
- Contact the proper personnel following the chain of command.
- Inform and remove unnecessary employees from the area.
- If the spilled material is flammable, remove any open flames or sources of ignition. Use non-sparking tools and grounding wires if needed.
- Determine the identity and hazards of the material and any personal protective equipment such as impermeable gloves required for handling using the MSDS.
- Isolate drains, streams, or ditches.
- Stop additional material from spilling at its source if possible. For example, plug a leaking hole in a barrel or turn the barrel so that hole is on top.
- To the extent that this action does not compromise cleanup activities, spills should be covered and protected from storm water contact during rainfall.
- Spills shall not be buried or washed with water.

- Used cleanup materials, contaminated materials and recovered spill material that is no longer suitable for its intended purpose should be stored and disposed of in conformance with these special provisions.
- Water used for cleaning and decontamination shall not be allowed to enter storm drains or watercourses.
- Contain the spill by placing absorbent “socks” or other material to prevent the spill from running into storm drains, bare soil, large surface areas, etc.
- Pump large quantities to an empty drum or container that will hold the material.
- Collect smaller quantities and/or remaining liquid by absorbing liquid with absorbents or sand. Gently scoop or sweep up the residue and place in empty container.
- Label all containers containing spill collection and debris as soon as possible.
- Do not try to clean up spills of unfamiliar materials if adequate hazard communication information is not in place.
- Update spill prevention and control plans and stock appropriate cleanup materials whenever changes occur in the types of chemicals stored on-site.

5. Environmental Permits

General: Many types of activities and discharges of pollutants are regulated by MDEQ through issuing environmental permits. MDEQ’s Environmental Permits Division (EPD) implements and oversees most of the permitting programs for MDEQ. EPD also provides support to the Environmental Compliance and Enforcement Division (ECED) in regulating the permitted facilities. The Service Branch of the Environmental Permits Division is responsible for the issuance of all media environmental permits for the hospitals, automotive related facilities scrap and salvage facilities, textile and apparel manufacturing facilities, printing and publishing facilities, and dry cleaning facilities. The Branch also permits all cleanup sites covered under the Leaking Underground Storage Tank (LUST) Program.

The General Permits Branch of the EPD oversees the development, issuance, and maintenance of the general permits issued by EPD. A general permit authorizes a category of discharge or emission within a geographical area. A general permit is not specifically tailored for an individual facility or project. An example of a general permit is the Municipal Separate Sewer System (MS4) General National Pollutant Discharge Elimination System Permit.

Types of permits issued by MDEQ include: Wastewater Discharge and Storm Water, Air, Hazardous Waste, Non-hazardous Waste, Mining, and Water Withdrawal.

a. NPDES – Wastewater Discharge and Storm Water

At the moment, Materials Laboratories operations are unaffected by NPDES regulations.

b. Air

EPA establishes standards for air quality, and the MDEQ is responsible for overseeing air emissions requirements in Mississippi. Of primary concern for air quality are volatile organic compounds (VOCs) and hazardous air pollutants (HAPs).

Several types of air permits are issued by MDEQ depending on the amount and type of emissions. Most laboratory operations are exempt of Air Emission regulations:

- Permits to Construct - for Greenfield stationary sources
- Prevention of Significant Deterioration (PSD) Permit to Construct (potential to emit 250 tons per year or be one of 28 industrial categories)
- Permit to Operate
- Title V Permit to Operate
- Synthetic Minor Operating Permit
- Major Source of HAP Emissions

c. Non-hazardous Waste

Although, the MDOT does not own or operate permitted non-hazardous disposal facilities, the agency is responsible for appropriate disposal of non-hazardous wastes at permitted facilities. The Mississippi Non-hazardous Waste Management Regulations provide for management and disposal of specific wastes:

- (1) Municipal Solid Waste or Subtitle D Landfills: Individual permits are required for the approved disposal of non-hazardous solid wastes, including putrescible wastes, from the operation of residential, commercial, governmental, industrial or institutional facilities. Petroleum contaminated soil and material can generally be disposed in a municipal solid waste landfill.
- (2) Industrial/Non-Municipal Waste or Special Waste Landfills: Individual permits are required for construction and operation for industrial solid wastes generated by a manufacturing or industrial process.
- (1) Class I and Class II Rubbish Disposal Facilities: These facilities are permitted under a "Certificate of Coverage" under an applicable general permit or an individual permit.
 - (A) Class I Rubbish Facility:
 - Construction and demolition debris (wood and metal)
 - Brick, mortar, concrete, stone, and asphalt
 - Cardboard
 - Appliances (excluding refrigerators and air conditioners) with motor removed
 - Furniture
 - Plastic, glass
 - Sawdust, wood chips and shavings
 - (B) Class II Rubbish Facility
 - Natural vegetation – tree limbs, stumps, and leaves
 - Brick mortar, stone, concrete and asphalt

6. Environmental Reporting and Compliance

a. Emergency Planning and Community Right to Know

The federal Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 (which is also known as the Superfund Amendments and Reauthorization Act (SARA) Title III) includes several reporting requirements to let members of the local community know what chemicals are stored or used at facilities in their neighborhoods.

- (1) Hazardous chemical (including fuels) inventory reporting: Reports are required from facilities that store more than 10,000 pounds at any one time during the year (roughly 1500 gallons for fuels) of any hazardous chemicals for which material safety data sheets (MSDS) are required under the OSHA Hazard Communication Standard. The chemicals/products to be reported are not on a designated list, but are broad chemical categories - fire; sudden release of pressure; reactivity; acute health hazard; and chronic health hazard. Fuels and large quantities of paints and vehicle fluids stored at one location would be the likely products for which a MDOT facility could exceed the reporting threshold.

The local fire department, and/or County Local Emergency Planning Committee (LEPC) and MEMA, must be notified within 90 days if a chemical or product is stored above this threshold (also, provide copies of notifications to the Regional Safety Representative). An inventory form, called a Tier II form, that includes the chemical/product names and maximum amount stored during the previous year must be submitted by March 1 of each year to these organizations.

- (2) Toxic Chemical Release Inventory (TRI) reporting: Another community right-to-know regulation requires reporting when a certain chemical is used or generated at a quantity exceeding 5,000 pounds per year at a facility. Reportable chemicals are on a designated "Toxic Chemical List" and report ability considers all products in which they may be present. Several exemptions may apply to chemicals present in products used for certain activities including maintaining motor vehicles operated by the facility; use as a structural component of the facility; and routine janitorial or facility grounds maintenance. Use of the exemptions is discouraged for activities that are a significant part of the facility/agency mission.

Chemicals requiring reporting have been present in traffic marking paints and included: methanol, glycol ethers, lead compounds, chromium compounds, styrene, and an epoxy paint hardener compound.

The federal requirements for hazardous chemical inventory and TRI reporting are in 40 CFR Part 370 and 40 CFR Part 372, respectively. TRI reports must be submitted to USEPA Region IV and MDEQ.

b. Spill Reporting

- (1) Oil and Petroleum Products

There is no quantitative definition that triggers reporting requirements for an oil spill. A **Reportable Spill** for Federal regulatory requirements is defined in 40 CFR 110 as “a discharge of such quantities of oil into or upon the navigable waters of the United States or adjoining shorelines determined to be harmful to the public welfare of the United States . . . to include discharges which violate applicable water quality standards or cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines, or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.”

Therefore, in order to determine whether an oil spill requires Federal notification, it must be determined whether the oil has entered (or poses a threat to) navigable waters of the United States. The definition of “navigable waters of the United States” (which may be found in 40 CFR 110) is very broad. In general, it includes nearly all surface waters, tributaries (including intermittent streams), and adjacent wetlands.

As a matter of practice, Federal notification is likely required for any oil spill that has migrated off-site by surface drainage (or threatens to migrate off-site) and/or has entered a storm drain that flows off-site.

An oil spill that requires Federal notification must be reported to the National Response Center (NRC) (800) 424-8802. This notification must be done as soon as possible after the spill is discovered.

An example notification form containing information required for NRC notification is provided as Form MND-302I. It is not necessary to compile all information before calling NRC.

In addition, the State of Mississippi includes groundwater in the definition of the “waters of the State,” and discharge of oil into groundwater would constitute a reportable spill to the State. Therefore, an oil spill incident, which enters soil and threatens to reach groundwater, may require state notification (but not necessarily Federal notification). **Oil spill incidents requiring state notification must be reported to the Mississippi Department of Environmental Quality (MDEQ).**

(2) Chemicals (Designated Hazardous Substances)

Title 40 CFR 302, under the authority of Section 102 CERCLA designates a list of hazardous substances, identifies **Reportable Quantities (RQs)**, and sets forth notification for releases of these substances. The regulation also sets forth RQs for hazardous substances designated under Section 311 of the Clean Water Act. A discharge of any one of these hazardous substances in excess of the reportable quantity to the “environment” (meaning air, land, water, and releases that may enter groundwater) within a 24-hour period is defined as a **Reportable Spill**.

The federal Chemical Spill Reporting Requirements are listed in EPA regulations, 40 CFR Part 302.4, “Designation, Reportable Quantities and Notification” (the reportable quantities are also included in Appendix A of the USDOT regulation 49 CFR part 172.101 (Hazardous Materials Table)).

The regulation requires notice to the **National Response Center (NRC) (800) 424-8802** when a hazardous substance is released into the environment in amounts greater than the RQ.

If a spill of hazardous material occurs, the quantity of the material spilled, as well as the proportion of the hazardous substance within the material, must be considered to determine whether an RQ has been exceeded. Information contained in the materials MSDS sheet is useful for this purpose.

A copy of a Notification Form for Reportable Spills to the National Response Center (NRC), Spill Reporting Form is attached. It is not necessary to wait on all information before calling the NRC.

- Report any significant hazardous substance spill to the **24-hour State Warning Point at the Mississippi Emergency Management Agency (601) 352-9100 or 1-800-222-6362**. Spills of any pollutant, not just hazardous materials, which may affect state waters, land, air, or public health, must be reported.
- Spills of regulated chemicals must also be reported to the **National Response Center** if the spill reaches or exceeds the listed “reportable quantities”. As previously mentioned, the reportable quantity (RQ) pertains to the quantity of the specific chemical released; the quantity of the chemical within a release of a mixture or product should be estimated to determine if the RQ was exceeded. (For example, the quantity of methanol released in a 100 pound release of concrete sealant (approximately 15 gallons) containing 22% methanol is 22 pounds). The following table includes the federal RQs (49 CFR 172.101) for chemicals present in appreciable quantity in common products used by state DOTs:

| Chemical/Typical present | Product where | Federal RQ (lb) |
|---|---------------|-----------------|
| Ethylene Glycol (antifreeze) | | 5000 |
| Hydrochloric Acid (muriatic acid) | | 5000 |
| Lead compounds (yellow or old leaded paint) | | 10 |
| Methanol (paints, sealants) | | 5000 |
| Styrene (polyester paints) | | 1000 |
| Sulfuric Acid (batteries) | | 1000 |
| Toluene | | 1000 |
| Xylene | | 100 |

Chemicals such as isopropanol, calcium chloride, magnesium chloride, most herbicides (including Escort, Krenite, Oust, Rodeo, and Roundup), propylene glycol, ethanol, and salt present in common products used in MDOT activities are not regulated and do not have reportable quantity notification requirements. Many chemicals are not listed, which does not mean they are harmless and do require appropriate cleanup.

(3) Post-Incident Reporting

Whenever more than 1,000 gallons of oil are discharged into navigable waters in a single incident, or more than 42 gallons of oil are discharged in each of two incidents occurring within any 12-month period, a written report must be submitted to the USEPA Regional Administrator:

US Environmental Protection Agency
Region IV
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303-3104
(404) 562-8700

This report must also be sent to the state agencies responsible for oil pollution control activities and to the National Response Center:

Mississippi Department of Environmental Quality
Emergency Services
P.O. Box 20305
Jackson, MS 39289-1305

MEMA
P.O. Box 4501
Jackson, MS 39296-4501

National Response Center
C/o United States Coast Guard (CG-OPF)
Room 2611
2100 Second Street, SW
Washington, DC 20593-0001

These requirements are defined in 40 CFR 112.4. The report must contain the following:

- Name of facility.
- Name(s) of the owner or operator of the facility.
- Location of the facility.
- Maximum storage or handling capacity of the facility and normal daily throughput.
- An adequate description of the facility, including maps, flow diagrams, and topographical maps (Provide a complete copy of the SPCC, if available).
- The cause(s) of such discharges, including a failure analysis of system or subsystem in which the failure occurred.

- Corrective actions and/or countermeasures taken, including a description of equipment repairs and/or replacements.
- Additional preventive measure(s) taken or contemplated to minimize the possibility of recurrence.
- Such other information as the Regional Administrator may reasonably require as pertinent to the plan or discharge.

The USEPA will determine the need for a written incident report for hazardous substance releases on an individual basis, based primarily on the telephonic report to the NRC.

E. TRAINING OF MATERIALS LABORATORY PERSONNEL

A training program on environmental management practices outlined in this EMP Guide will be implemented for laboratory personnel. The training program will consist of a short course for “awareness” level training for staff members. The guide to environmental management issues will be made available to all laboratory staff.

F. INSPECTION PROGRAM

General: This policy establishes a procedure to implement an effective environmental inspection program. MDOT’s objective is to close all non-conformances within time limits set by management at the time inspection findings are reviewed. Important benefits are cross-training, increased awareness of environmental requirements among its staff, and continuous improvement.

MDOT’s environmental inspection program will focus on prioritizing compliance issues, managing environmental risks, and improving operations, reducing costs, and verifying the effectiveness of management systems that will ensure compliance. MDOT will identify and prioritize inspection issues, and develop standard inspection protocols or methods.

Procedures:

Personnel appointed by the State Materials Engineer will inspect each Materials Laboratory on an annual basis. The inspection team will consist of personnel familiar with MDOT operations and environmental issues at materials laboratory facilities. The Materials Engineer at each District will perform routine inspections on a monthly basis.

1. Annual Inspections

- The Materials Engineer of the District to be inspected should be notified of the inspection at least 30 days prior to the inspection.
- The inspection team will prepare, in advance, the inspection methodology to be used, including revising checklists, worksheets, interview questions, and protocols. A Monthly/Annual Inspection Checklist is provided.
- The inspection team will conduct an opening meeting with the local management employees from the area being inspected. The purpose of this meeting will be to review the inspection scope, methods, logistics, reporting requirements, and follow-up requirements.

- The inspection team will use accepted methods to collect objective, verifiable evidence pertaining to the environmental aspects that are the subject of the inspection. This evidence will include, but not be limited to observation, measurement, photographs, document review, interviews, testing, or inspection.
- Inspection findings, including any non-conformances, will be recorded in writing.
- The inspection team may hold interim meetings with local management to address questions or issues that arise during the inspection, or to revise the schedule as needed.
- The inspection team will conduct a closing meeting with local management at the completion of the inspection to review a summary of the findings before departing the area being inspected

2. Annual Inspection Reporting and Corrective Action Follow-up

- A written inspection report will be prepared by the inspection team within two weeks of an inspection. Copies of the inspection report will be forwarded to the State Engineer of Materials concerning the area that was inspected and listed on the Environmental Management Program website.
- Within two weeks of receiving the inspection report, a Corrective Action Plan will be submitted, which will identify specific corrective actions, resources required, persons responsible for completion, and target completion dates.
- Completion of the corrective actions required will be monitored. Completed actions will be deleted from tracking when evidence of completion is provided.
- If necessary, the inspection team may be asked to conduct a follow-up review of corrective actions to ensure effective implementation.
- Environmental policies or procedures may be revised as a result of the inspection process.

3. Monthly Inspection Program

- The Materials Engineer of each District will perform monthly inspections of each facility under his or her responsibility.
- Inspections will include an assessment of general facility conditions, materials and waste handling procedures, and evidence of spills. A Monthly/Annual Environmental Checklist is provided.
- Inspection Findings will be reported to the State Engineer of Materials. The findings will include non-conformances and actions or recommendations to address issues noted during the inspection.

D. DEFINITIONS/ACRONYMS

The following definitions are commonly used terms in MDOT environmental programs and are provided for reference.

Abatement: Reducing the degree or intensity of, or eliminating, pollution.

Absorption: The uptake of water, other fluids, or chemicals by a material to aid in spill clean-ups.

Accident Site: The location of an unexpected occurrence, failure or loss, either at a plant or along a transportation route, resulting in a release of hazardous materials.

Action Levels: In the Superfund Program or MDEQ Voluntary Clean Up and Brownfields Programs, the existence of a contaminant concentration in the environment high enough to warrant action or trigger a response under an environmental regulatory program which has identified maximum allowable concentrations of contaminants under specific circumstances (SARA and the National Oil and Hazardous Substances Contingency Plan). The term is also used in other regulatory programs.

Administrative Order: A legal document signed by EPA or MDEQ directing an individual, business, or other entity to take corrective action or refrain from an activity. It describes the violations and actions to be taken, and can be enforced in court. Such orders may be issued, for example, as a result of an administrative complaint whereby the respondent is ordered to pay a penalty for violations of a statute.

Air Contaminant: Any particulate matter, gas, or combination thereof, other than water vapor. (See air pollutant.)

Air Pollutant: Any substance in air that could, in high enough concentration, harm man, other animals, vegetation, or material. Pollutants may include almost any natural or artificial composition or airborne matter capable of being airborne. They may be in the form of solid particles, liquid droplets, gases, or any combination thereof. Generally, they fall into two main groups: (1) those emitted directly from identifiable sources and (2) those produced in the air by interaction between two or more

primary pollutants or by reaction by normal atmospheric constituents with or without photo activation. Exclusive of pollen, fog, and dust, (which are of natural origin), about 100 contaminants have been identified. Air pollutants are often grouped in categories for ease in classification; some of the categories are: solids, sulfur compounds, volatile organic chemicals, particulate matter, nitrogen compounds, oxygen compounds, halogen compounds, radioactive compounds, and odors.

Air Pollution: The presence of contaminants or pollutant substances in the air that interfere with human health or welfare, or produce other harmful environmental effects.

Air Quality Standards: The level of pollutants prescribed by regulations that are not to be exceeded during a given time in a defined area.

Air Toxics: Any air pollutant for which a national ambient air quality standard (NAAQS) does not exist (i.e. excluding ozone, carbon monoxide, PM-10, sulfur dioxide, nitrogen oxide) that may reasonably be anticipated to cause cancer; respiratory, cardiovascular, or developmental effects; reproductive dysfunctions, neurological disorders, inheritable gene mutations, or other serious or irreversible chronic or acute health effects in humans.

Ambient Air Quality Standards: The 1970 amendments to the Clean Air Act required EPA to set National Ambient Air Quality Standards for certain pollutants known to be hazardous to human health. EPA has identified and set standards to protect human health and welfare for six pollutants: ozone, carbon monoxide, total suspended particulates, sulfur dioxide, lead, and nitrogen oxide. The term "criteria pollutants" derives from the requirement that EPA must describe the characteristics

and potential health and welfare effects of these pollutants. It is on the basis of these criteria that standards are set or revised.

Asbestos: A mineral fiber that can pollute air or water and cause cancer or asbestosis when inhaled. EPA has banned or severely restricted its use in manufacturing and construction.

Asbestos Abatement: Procedures to control fiber release from asbestos-containing materials in a building or to remove them entirely, including removal, encapsulation, repair, enclosure, encasement, and operations and maintenance programs.

Asphalt: A highly viscous liquid that occurs naturally in most crude petroleum. Asphalt can be separated from the other components in crude oil (such as naphtha, gasoline and diesel) by the process of fractional distillation, usually under vacuum conditions.

Asphalt Emulsion: An emulsion of asphalt binder and water that contains a small amount of an emulsifying agent. Emulsified asphalt droplets may be anionic (negative charge), cationic (positive charge) or nonionic (neutral).

Asphalt Release Agent: Material used to prevent bonding of asphalt to a form surface.

AST: Above Ground Storage Tank

Beneficial Fill: The use of uncontaminated, non-water soluble, non-decomposable Class II rubbish wastes to level an area or bring the area to grade for beneficial purposes, where an earthen cover is applied upon completion of the fill. Such beneficial purposes may not be conducted for monetary compensation, and may include landscaping, erosion control or repair, land stabilization, construction base preparations or other land improvements.

Beneficial Use: The legitimate use of a solid waste in the manufacture of a product or as a product for construction, soil amendment, or other purposes, where the solid waste replaces a natural or other resource material by its utilization.

Benzene: A colorless, flammable, liquid aromatic hydrocarbon derived from petroleum and used as a component of or utilized to manufacture a wide variety of chemical products, including DDT, detergents, insecticides and motor fuels.

Berms: A small artificial ridge of soil or other materials constructed to prevent fluid movement.

BMP: Best Management Practices - schedules of activities, prohibitions of practices, maintenance procedures, and other management practices enacted to prevent or reduce potential pollution. BMP's also include treatment requirements, operating procedures, and practices to control runoff, spillage or leaks, sludge or waste disposal, or drainage from material storage.

Cathodic Protection: A technique to prevent corrosion of the metal surface of an underground storage tank. Two types are galvanic (sacrificial anode) and impressed current. MDEQ has specific guidelines for testing, inspecting and record keeping of cathodic protection systems.

Characteristic Wastes: A hazardous waste exhibiting one or more of the following:

Ignitability D001 – Ignitable wastes can create fires under certain conditions. Examples include liquids, such as solvents that readily catch fire and friction-sensitive substances.

Corrosivity D002 – Corrosive wastes include those that are acidic and those that are capable of corroding metal (such as tanks, containers, drums and barrels).

Reactivity D003 – Reactive wastes are unstable under normal conditions. They can create explosions and/or toxic fumes, gases and vapors when mixed with water.

Toxicity D004 – D042 – Toxic wastes are harmful or fatal when ingested or absorbed. When toxic wastes are disposed of on land, contaminated liquid may drain (leach) from the waste and pollute ground water. Toxicity is identified through a laboratory procedure using Toxicity Characteristic Leaching Procedure (TCLP) test.

Chlorinated Solvents: An organic solvent containing chlorine atoms (e.g. methylene chloride and 1, 1, 1-trichloromethane). Uses of chlorinated solvents include aerosol spray containers, and dry cleaning fluids.

Class I Rubbish Landfill: Class I rubbish sites may accept all solid wastes that are defined as rubbish wastes. These wastes generally include construction and demolition debris, brick, mortar, concrete, stone, asphalt, cardboard, natural vegetation, appliances which have had the motor removed (except refrigerators), furniture, plastic, glass, crockery, metal (except containers), sawdust, wood shavings and wood chips.

Class II Rubbish Landfill: Class II rubbish sites may accept limited types of rubbish wastes which are more inert. These wastes include natural vegetation, brick, mortar, concrete, stone and asphalt.

Cold Mix Asphalt: Produced by emulsifying the asphalt in water with a surfactant prior to mixing with aggregate. While in its emulsified state, the asphalt is less viscous and the mix is easier to work and compact. The emulsion will break after enough water evaporates back out, and the cold mix will ideally take on the properties of cold HMA. Cold mix is commonly used as a road patching material.

Conditionally Exempt Small Quantity Generators: Persons or enterprises which produce less than 220 pounds of hazardous waste per month. Exempt from most regulation, they are required to determine whether their waste is hazardous, notify appropriate state or local agencies, and ship any derived wastes by an authorized transporter to a permitted facility for proper disposal.

Construction and Demolition Waste: Waste building materials, dredging materials, tree stumps, and rubble resulting from construction, remodeling, repair, and demolition of homes, commercial building and other structures and pavements. May contain lead, asbestos, or other hazardous substances.

Corrosive: A chemical agent that reacts with the surface of a material causing it to deteriorate or wear away.

CWA: Clean Water Act

DGSD: Director of General Services Division

District Emergency Coordinator: The MDOT employees responsible for coordination of a response to a hazardous material incident. Specific duties are detailed in MDOT's Hazardous Materials Response Plan.

Diversion Ditches: A channel with a supporting ridge on the lower side constructed across a slope to divert water at a non-erosive velocity to sites where it can be used and disposed of.

ECED: Environmental Compliance and Enforcement Division of MDEQ

Effluent: Wastewater – treated or untreated – that flows out of a treatment plant, sewer, or industrial outfall. Generally refers to wastewater discharged into surface waters.

EPCRA: Emergency Planning and Community Right to Know Act.

EPD: Environmental Permits Division of MDEQ

Extremely Hazardous Substances: Any of 406 chemicals identified by EPA as toxic, and listed under SARA title III. The list is subject to periodic revision.

Flammable Products: Any material that ignites easily and will burn rapidly.

Flash Point: The lowest temperature at which evaporation of a substance produces sufficient vapor to form an ignitable mixture with air.

General Construction Storm Water Permit MSR10: A general construction permit issued for projects 5 acres or greater to discharge storm water associated with construction activity into state waters.

General Construction Storm Water Permit MSR15: A general permit for small construction projects (equal to or greater than one acre and less than five acres) to discharge storm water associated with construction activity under the terms and conditions of the permit.

General Permit: Authorizes a category of discharge or emission within a geographic area and not tailored to an individual facility or project.

Generator: 1. A facility or mobile source that emits pollutants into the air or releases hazardous waste into water or soil. 2. Any person, by site, whose act or process produces regulated waste or whose act first, causes such waste to become subject to regulation. Where more than one person (e.g. doctors with separate medical practices) is located in the same building, each business entity is a separate generator.

Groundwater: The supply of fresh water found beneath the Earth's surface, usually in aquifers, which supply wells and springs. Because ground water is a major source of drinking water, there is

growing concern over contamination from leaching agricultural or industrial pollutants or leaking underground storage tanks.

Hazardous Air Pollutants: Air pollutants which are not covered by ambient air quality standards but which, as defined in the Clean Air Act, may present a threat of adverse human health effects or adverse environmental effects. Examples of such pollutants include asbestos, beryllium, mercury, benzene, coke oven emissions, radio nuclides, and vinyl chloride.

Hazardous Chemical: An EPA designation for any hazardous material requiring as MSDS under OSHA's Hazard Communication Standard. Such substances are capable of producing fires and explosions or adverse health effects like cancer and dermatitis. Hazardous chemicals are distinct from hazardous waste.

Hazard Communication (Hazcom) Program: An OSHA regulation that requires chemical manufacturers, suppliers, and importers to assess the hazards of the chemicals that they make, supply, or import, and to inform employers, customers, and workers of these hazards through MSDS information.

Hazardous Material: Any substance or mixture of substances having properties capable of producing adverse effects on the health and safety and the environment of a human being. The U.S. Department of Transportation lists nine Classes of Hazardous Materials:

- Class 1 – Explosives
- Class 2 – Gases
- Class 3 – Flammable Liquids
- Class 4 – Flammable Solids
- Class 5 – Oxidizers & Organic Peroxides
- Class 6 – Toxic Materials & Infectious Substances
- Class 7 – Radioactive Materials
- Class 8 – Corrosive Materials
- Class 9 – Miscellaneous Dangerous Goods

Hazardous Substance: Under CERCLA, any element, compound, mixture, solution, or substance which, when released into the environment, may present substantial danger to public health/welfare or the environment. Also includes (1) any substance designed under Section 311 (b) (2) (A) or any toxic pollutant listed under Section 307 (a) of the Federal Water Pollution Control Act; (2) any hazardous waste having the characteristics identified under RCRA 3001; (3) any hazardous air pollutant listed under Section 112 of the Clean Air Act; and (4) any imminently hazardous chemical substance or mixture for which the government has taken action under Section 7 of the Toxic Substances Control Act. Excludes petroleum, natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel. The definition is broader than the definition of hazardous waste under RCRA.

Hazardous Waste: By-products of society that can pose a substantial or potential hazard to human health or the environment when improperly managed. Possesses at least one of four characteristics (ignitability, corrosivity, reactivity, or toxicity) or appears on special EPA lists.

HAZCOM: Hazard Communication. The responsibilities of managers concerning possible hazards in the workplace and notification of hazards and necessary precautions to their employees.

Herbicides: A chemical pesticide designed to control or destroy plants, weeds, or grasses.

Hot Mix Asphalt Concrete (HMAC): Produced by heating the asphalt in order to decrease its viscosity and drying the aggregate to remove moisture prior to mixing. Mixing is generally performed at approximately 160 degrees Celsius, while asphalt paving and compaction are performed at approximately 140 degrees Celsius. HMAC is the form of asphalt concrete most commonly used on highly trafficked pavements, such as those on major highways and airfields.

Ignitable: Capable of burning or causing a fire.

Illicit Discharge: Any discharge to a municipal separate storm sewer system that is not composed entirely of storm water except discharges pursuant to a NPDES permit and those non-storm water discharges identified in Part I.B.4. of the MS4 permit. These MS4 approved non-storm discharges include landscape irrigation, discharges from potable sources, fire hydrant flushing's, and air conditioning condensate.

Landfill: A controlled area of land upon which solid wastes are deposited, compacted, and covered with no on-site burning of wastes, and which is so located, contoured, drained and operated so that it will not cause an adverse effect on public health or the environment. This term includes Municipal Solid Waste Landfills (MSWLF) units and other classifications of landfills, but not sites which receive only rubbish.

Large Quantity Generators: Person or facility generating more than 2200 pounds of hazardous waste per month. Such generators produce about 90 percent of the nation's hazardous waste, and are subject to all RCRA requirements.

Leach Field: Porous area of soil through which septic tank leach lines run, emptying the treated liquid waste forced from the tank, which then percolates down through the soil.

Leak Detection Devices: A device or method that is capable of detecting leaks in an underground storage tank system.

Listed Wastes: Wastes listed as hazardous under the Resource Conservation and Recovery Act but which have not been subjected to the Toxic Characteristics Listing Process because the dangers they present are considered self-evident.

MDEQ: Mississippi Department of Environmental Quality

MDH: Mississippi Department of Health

MDOT: Mississippi Department of Transportation

MDMR: Mississippi Department of Marine Resources

MEMA: Mississippi Emergency Management Agency

Material Safety Data Sheet (MSDS): A compilation of information required under the OSHA Communication Standard on the identity of hazardous chemicals, health, and physical hazards, exposure limits, and precautions. Section 311 of SARA requires facilities to submit MSDSs under certain circumstances.

Medical Waste: Any solid waste generated in the diagnosis, treatment, or immunization of human beings or animals, in research, or in the production or testing of biological materials and agents, excluding hazardous waste identified or listed under 40 CFR Part 261 or any household waste as defined in 40 CFR Sub-section 261.4(b)(1).

Methamphetamine: Commonly known as Crystal Meth, an addictive stimulant drug made in illegal laboratories.

MTC: Mississippi Transportation Commission

Mississippi Ground Water Protection Trust Fund: A fund utilized to reimburse owners of underground storage tanks who are in substantial compliance with the MDEQ regulations for reasonable and necessary costs incurred to determine the extent of and to clean up contamination resulting from releases of motor fuels from underground storage tanks where those releases pose a threat to the environment or a threat to the public health, safety or welfare.

Municipal Solid Waste: Common garbage or trash generated by industries, businesses, institutions, and homes, excluding oil field exploration and production wastes and sewer sludge.

National Response Center: (NRC) is the sole federal point of contact for reporting oil and chemical spills.

Navigable Waters: Traditionally, waters sufficiently deep and wide for navigation by all or specified vessels. Such waters in the United States come under federal jurisdiction and are protected by certain provisions of the Clean Water Act.

NEPA: National Environmental Policy Act of 1969 as amended by the Environmental Quality Improvement Act of 1970

NFPA: National Fire Protection Association

Non-Hazardous Industrial Waste: Industrial process waste or wastewater not considered municipal solid waste or hazardous waste under RCRA.

Non-Hazardous Solid Waste: A subset of solid wastes that does not pose substantial or potential threats to public health or the environment.

Non-Potable: Water that is unsafe to drink because it may contain pollutants, contaminants, minerals, or infective agents.

NPDES: National Pollutant Discharge Elimination System

Oil/Water Separator: Device used for the separation of oils from wastewater generated from vehicle maintenance and washing.

OLWR: Office of Land and Water Resources

OSHA: Occupational Safety and Health Administration

OSHA's Hazard Communication Standard (29 CFR 1910.1200): An OSHA regulation that requires chemical manufacturers, suppliers, and importers to assess the hazards of the chemicals that they make, supply, or import, and to inform employers, customers, and workers of these hazards through MSDS information.

Petroleum Products: Crude oil or any fraction thereof that is liquid under normal conditions of temperature and pressure. The term includes petroleum based substances comprising a complex blend of hydrocarbons derived from crude oil through the process of separation, conversion, upgrading, and finishing, such as motor fuel, jet oil, lubricants, petroleum solvents, and used oil.

Potable: Water that is safe for drinking and cooking.

POTW: Publicly Owned Treatment Works

PPE: Personal Protective Equipment

Pretreatment Permit: A permit issued to regulate non-domestic wastewater discharges to Publicly or Privately Owned Treatment Works (POTW).

Prevention of Significant Deterioration (PSD): EPA program in which state and/or federal permits are required in order to restrict emissions from new or modified sources in places where air quality already meets or exceeds primary and secondary ambient air quality standards.

Putrescible Waste: Solid waste that contains organic matter capable of decomposing by micro-organisms.

RAP: Reclaimed Asphalt Pavement

RCRA: Resource Conservation and Recovery Act

Reactive: Tending to participate readily in reactions.

Recyclables: Items that can be reprocessed into feedstock for new products. Common examples are paper, glass, aluminum, corrugated cardboard and plastic containers.

Recyclable Waste Management: Related to storage, collection, transportation, treatment, utilization, processing and final disposal of recyclable waste or resource recovery and facilities necessary for such activities.

Reportable Quantity (RQ): Quantity of a hazardous substance that triggers reports of releases under CERCLA. If a substance exceeds its RQ, the release must be reported to the National

Response Center, the SERC, and the community emergency coordinators for areas likely to be affected.

Reportable Spill: Reportable spills are defined as hazardous material releases, which equal or exceed the reportable quantity.

SDWA: Safe Drinking Water Act

Secondary Containment: The general strategy for preventing releases to the environment by containing a spill in the general area until the material is removed.

Septic Tank: An underground storage tank for wastes from homes or facilities not connected to a sewer line. Waste goes directly from the home to the tank.

Sharps: Medical implements such as hypodermic needles, syringes with needles, scalpels, razor blades, and also broken glass, which can cause injuries if not handled with care.

SIC Codes: A numbering system used to identify various types of industrial activities. The SIC Code is published by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. A particular industry may have more than one SIC Code, if it conducts several types of commercial or industrial activities.

Silviculture: The agriculture and management of forests and trees.

Small Municipal Separate Storm Sewer System (MS4): Small Municipal Storm Sewer System is defined at 40 CFR 122.26(b)(16) and refers to all separate storm sewers that are owned or operated by the United States, a State, city town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as an organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States, but is not defined as “large” or “medium” municipal separate storm sewer system. This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

Small Quantity Generators (SQG): Persons or enterprises that produce 220-2200 pounds per month of hazardous waste; SQG’s are required to keep more records than conditionally exempt generators. The largest category of hazardous waste generators, SQGs, includes automotive shops, dry cleaners, photographic developers, and many other small businesses.

Solid Waste: Non-liquid, non-soluble materials ranging from municipal garbage to industrial wastes that contain complex and sometimes hazardous substances. Solid wastes also include sewage sludge, agricultural refuse, demolition wastes, and mining residues. Technically, solid waste also refers to liquids and gases in containers, but not from a disposal standpoint.

SOP: Standard Operating Procedures.

Spill/Overflow Protection: Spill or overflow protection consists of the construction of a catch basin to contain spills that may occur.

Spill Prevention Control and Countermeasure Plan (SPCC Plan): Plan covering the release of hazardous substances as defined by the Clean Water Act.

State Transportation Emergency Coordinator (STEC): MDOT employee who coordinates with MEMA and other state agencies including MDEQ to respond to a hazardous materials incident. The specific duties of the STEC are detailed in the Hazardous Materials Response Plan.

Storm Water: Storm Water is defined at 40 CFR 122.26(b) (13) and means rainfall runoff, snowmelt runoff, and surface runoff and drainage.

Storm Water Discharges (expressed as a rate): The volume of water (and suspended sediment if surface water) that passes a given location within a given period of time.

Storm Water Management Program (SWMP): - refers to a comprehensive program to manage the quality of storm water discharged from the municipal separate storm sewer system.

Storm Water Pollution Prevention Plan (SWPPP): A comprehensive plan designed to manage the quality of storm water discharged from a facility or municipal separate storm sewer system.

Substantial Harm Criteria Checklist: Documentation in the form of a checklist at 40 CFR 112.20 (f) (1), that a facility poses a threat of substantial harm to the environment.

Tank Tightness Testing: Testing performed to assess the potential for leaks in lines or tanks by pressurizing the lines or tank and measuring pressure changes over time.

TCLP: Toxic Characteristic Leaching Procedure (see Characteristic Wastes).

Threshold Planning Quantities: A quantity designated for each chemical on the list of extremely hazardous substances that triggers notification by facilities to the State Emergency Response Commission that such facilities are subject to emergency planning requirements under SARA Title III.

Tier II Form: A detailed chemical inventory form which is used to comply with sections 311 and 312 of Energy Planning and Community Right to Know Act.

Toxic Chemical: Any chemical listed in EPA rules as “Toxic Chemicals Subject to Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986.”

Toxic Chemical Release Inventory: Database of toxic releases in the United States compiled from SARA Title III Section 313 reports.

Toxicity: The degree to which a substance or mixture of substances can harm humans or animals. Acute toxicity involves harmful effects in an organism through a single or short-term exposure. Chronic toxicity is the ability of a substance or mixture of substances to cause harmful effects over an extended period, usually upon repeated or continuous exposure sometimes lasting for the entire

life of the exposed organism. Sub-chronic toxicity is the ability of the substance to cause effects for more than one year but less than the lifetime of the exposed organism.

Toxic Material: Toxic material means any substance present in sufficient concentration or amount to cause significant injury or illness to plant, animal, aquatic, or human life.

Universal Waste: Any of the following hazardous wastes that are managed under the universal waste requirements of 40 CFR part 273; batteries as described in 40 CFR 273.2, pesticides as described in 40 CFR 273.3, thermostats as described in 40 CFR 273.4 and lamps as described in 40 CFR 273.5.

USACOE: U.S. Army Corp of Engineers

Used Oil: Spent motor oil from motor vehicles or equipment collected at specified locations for recycling (not included in the category of municipal solid waste).

UST (Underground Storage Tank): Any tank, including the underground piping, which has at least 10% of its volume underground. Underground storage tanks exempted from the regulations include:

- farm and residential tanks holding 1,100 gallons or less of motor fuel for noncommercial purposes
- tanks used to fuel heating systems
- tanks on or above the floor of underground floors
- septic tanks
- flow-through process tanks
- tanks holding 110 gallons or less
- emergency spill and overfill tanks

Volatile Organic Compound (VOC): Any organic compound that participates in atmospheric photochemical reactions except those designated by EPA as having negligible photochemical reactivity.

Waste Tires: A tire that is no longer mounted on a vehicle and is no longer suitable for use as a vehicle tire due to wear, damage, or deviation from the manufacturer's original specifications. A waste tire includes a repairable tire, scrap tire, and altered waste tire, but does not include a tire derived product, crumb rubber, or a used tire.

Water Quality Standards: State adopted and EPA-approved ambient standards for water bodies. The standards prescribe the use of the water body and establish the water quality criteria that must be met to protect designated uses.

Water Well: An artificial excavation installed or constructed by any method (drilling, boring or digging) for the purpose of withdrawing water from underground aquifers.

Wetlands: An area that is saturated by surface or ground water with vegetation adapted for life under those soil conditions, such as swamps, bogs, fens, marshes, and estuaries.

Forms

MDOT Central Laboratory Inspection Checklist

Facility: _____

Performed By: _____

Signature: _____

Date: _____

1. Soils Lab Testing Operations

- | | | | | |
|------|--|------------------------------|-----------------------------|-----------------------------|
| 1.1 | Incompatibles stored separately | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.2 | Containers properly labeled | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.3 | Containers closed except when in use | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.4 | Chemicals stored in appropriate containers in good condition | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.5 | Flammables stored properly and away from exits | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.6 | Hazardous Materials stored in appropriate areas | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.7 | Certifications up to date | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.8 | Proper test methods documented | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.9 | Ovens working properly and vented | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.10 | Mercury stored properly | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.11 | Mercury spill kit with response guide available | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.12 | Wastes being disposed of properly | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.13 | List Waste streams and disposal methods (wastewater, recyclable, solid and hazardous waste) | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |

Comments _____

2. Asphalt Lab Testing Operations

- | | | | | |
|------|--|------------------------------|-----------------------------|-----------------------------|
| 2.1 | Incompatibles stored separately | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 2.2 | Containers properly labeled | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 2.3 | Containers closed except when in use | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 2.4 | Chemicals stored in appropriate containers in good condition | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 2.5 | Flammables stored properly and away from exits | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 2.6 | Hazardous Materials/Wastes stored in appropriate areas | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 2.7 | Certifications up to date | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 2.8 | Proper test methods documented | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 2.9 | Ovens working properly and vented | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 2.10 | Wastes being disposed of properly | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 2.11 | List Waste streams and disposal methods (wastewater, recyclable, solid and hazardous waste) | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |

Comments _____

3. Physical Lab and Concrete Testing Operations

- | | | | | |
|------|--|------------------------------|-----------------------------|-----------------------------|
| 3.1 | Incompatibles stored separately | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.2 | Containers properly labeled | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.3 | Containers closed except when in use | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.4 | Chemicals stored in appropriate containers in good condition | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.5 | Flammables stored properly and away from exits | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.6 | Hazardous Materials/Wastes stored in appropriate areas | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.7 | Certifications up to date | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.8 | Proper test methods documented | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.9 | Ovens working properly and vented | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.10 | Wastes being disposed of properly | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.11 | List Waste streams and disposal methods (wastewater, recyclable, solid and hazardous waste) | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |

Comments _____

4. Cement Lab Testing Operations

- | | | | | |
|------|--|------------------------------|-----------------------------|-----------------------------|
| 3.1 | Incompatibles stored separately | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.2 | Containers properly labeled | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.3 | Containers closed except when in use | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.4 | Chemicals stored in appropriate containers in good condition | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.5 | Flammables stored properly and away from exits | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.6 | Hazardous Materials/Wastes stored in appropriate areas | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.7 | Certifications up to date | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.8 | Proper test methods documented | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.9 | Ovens working properly and vented | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.10 | Wastes being disposed of properly | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.11 | List Waste streams and disposal methods (wastewater, recyclable, solid and hazardous waste) | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |

Comments _____

5. Chemistry Testing Operations

- | | | | | |
|------|--|------------------------------|-----------------------------|-----------------------------|
| 3.1 | Incompatibles stored separately | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.2 | Containers properly labeled | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.3 | Containers closed or under hoods except when in use | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.4 | Chemicals stored in appropriate containers in good condition | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.5 | Flammables stored properly and away from exits | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.6 | Hazardous Materials/Wastes stored in appropriate areas | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.7 | Certifications up to date | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.8 | Proper test methods documented | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.9 | Ovens working properly and vented | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.10 | Wastes being disposed of properly | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.10 | Unneeded/Unused Materials needing disposal | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.11 | List Waste streams and disposal methods (wastewater, recyclable, solid and hazardous waste) | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |

Comments _____

6. General

- | | | | | |
|------|--|------------------------------|-----------------------------|-----------------------------|
| 4.1 | Chemical and food stored separately | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 4.2 | Gas cylinders labeled and stored appropriately | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 4.3 | Storage under hoods kept to a minimum | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 4.4 | Dust collectors working properly | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 4.5 | Fume hoods inspected and working properly | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 4.6 | Eye wash/Safety Showers present and maintained | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 4.7 | General housekeeping satisfactory | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 4.8 | Unknown or unneeded chemicals/material on site | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 4.9 | MSDS sheets present and up to date | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 4.10 | Chemical inventory complete | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 4.11 | Nuclear gauges stored properly and documentation available | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 4.12 | All drains functioning properly | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |

Comments _____

MDOT District Laboratory Inspection Checklist

Facility: _____

Performed By: _____

Signature: _____

Date: _____

1. Soils Testing Operations

- | | | | | |
|------|--|------------------------------|-----------------------------|-----------------------------|
| 1.1 | Incompatibles stored separately | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.2 | Containers properly labeled | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.3 | Containers closed except when in use | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.4 | Chemicals stored in appropriate containers in good condition | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.5 | Flammables stored properly and away from exits | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.6 | Hazardous Materials stored in appropriate areas | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.7 | Certifications up to date | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.8 | Proper test methods documented | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.9 | Ovens working properly and vented | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.10 | Mercury stored properly | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.11 | Mercury spill kit with response guide available | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.12 | Wastes being disposed of properly | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 1.13 | List Waste streams and disposal methods (wastewater, recyclable, solid and hazardous waste) | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |

Comments _____

2. Asphalt Testing Operations

- | | | | | |
|------|--|------------------------------|-----------------------------|-----------------------------|
| 2.1 | Incompatibles stored separately | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 2.2 | Containers properly labeled | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 2.3 | Containers closed except when in use | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 2.4 | Chemicals stored in appropriate containers in good condition | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 2.5 | Flammables stored properly and away from exits | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 2.6 | Hazardous Materials/Wastes stored in appropriate areas | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 2.7 | Certifications up to date | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 2.8 | Proper test methods documented | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 2.9 | Ovens working properly and vented | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 2.10 | Wastes being disposed of properly | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 2.11 | List Waste streams and disposal methods (wastewater, recyclable, solid and hazardous waste) | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |

Comments _____

3. Concrete Testing Operations

- | | | | | |
|------|--|------------------------------|-----------------------------|-----------------------------|
| 3.1 | Incompatibles stored separately | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.2 | Containers properly labeled | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.3 | Containers closed except when in use | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.4 | Chemicals stored in appropriate containers in good condition | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.5 | Flammables stored properly and away from exits | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.6 | Hazardous Materials/Wastes stored in appropriate areas | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.7 | Certifications up to date | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.8 | Proper test methods documented | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.9 | Ovens working properly and vented | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.10 | Wastes being disposed of properly | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 3.11 | List Waste streams and disposal methods (wastewater, recyclable, solid and hazardous waste) | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |

Comments _____

4. General

- | | | | | |
|------|--|------------------------------|-----------------------------|-----------------------------|
| 4.1 | Chemical and food stored separately | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 4.2 | Gas cylinders labeled and stored appropriately | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 4.3 | Storage under hoods kept to a minimum | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 4.4 | Dust collectors working properly | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 4.5 | Fume hoods inspected and working properly | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 4.6 | Eye wash/Safety Showers present and maintained | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 4.7 | General housekeeping satisfactory | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 4.8 | Unknown or unneeded chemicals/material on site | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 4.9 | MSDS sheets present and up to date | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 4.10 | Chemical inventory complete | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 4.11 | Nuclear gauges stored properly and documentation available | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 4.12 | All drains functioning properly | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |

Comments _____

Approved by:

Mississippi Department of Transportation – Material Laboratories

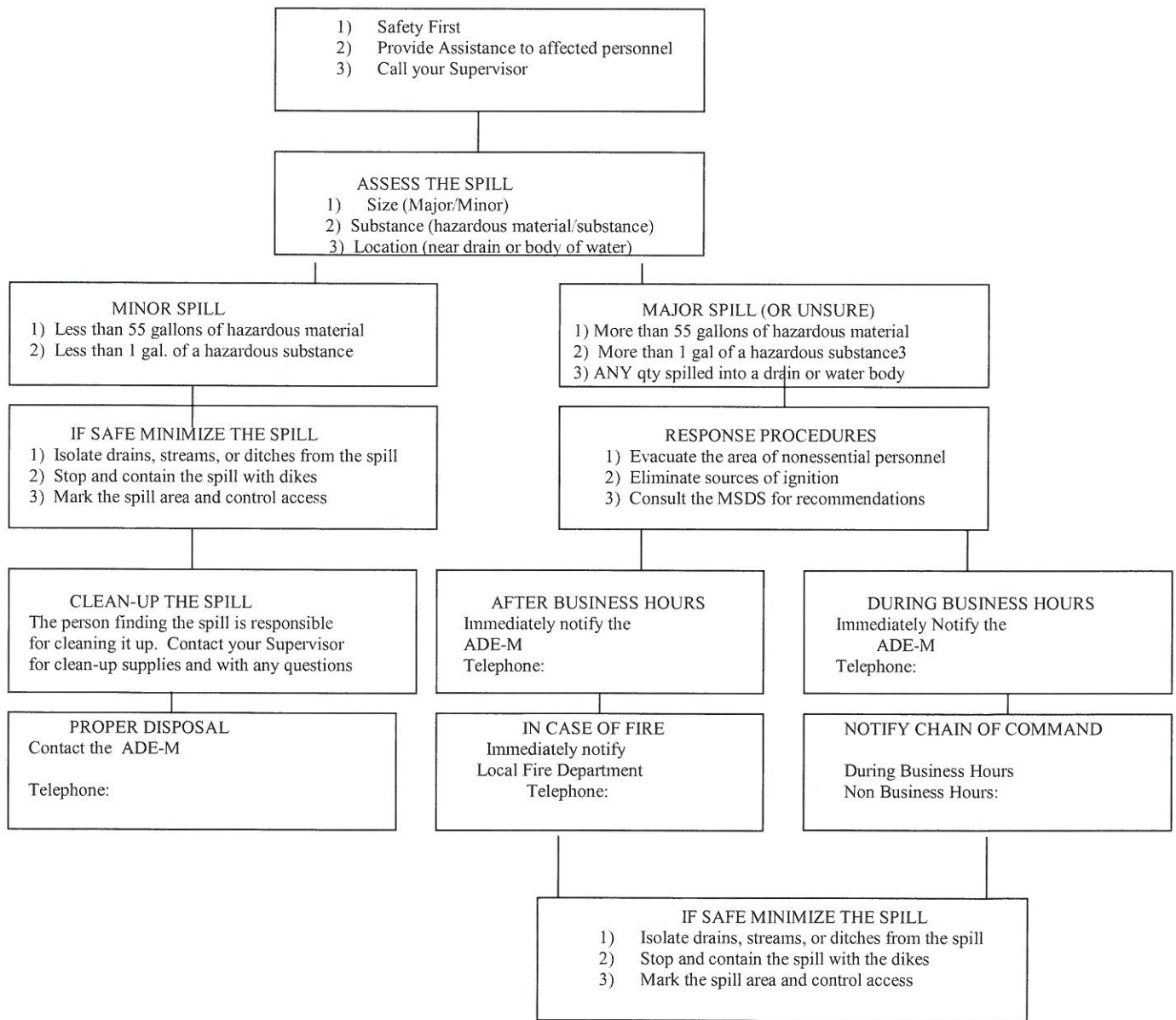
Subject: **Spill Response Procedures Flow Chart**

Effective Date:
Issued Date:

Dated



Spill Response Procedures Flow Chart



Approved by:

If in doubt, assume the worst and contact the 24-hour State Warning Point at MEMA – 1-800-222-6362
If a Reportable Quantity of a Hazardous Substance is released the NRC must be notified as soon as possible at 800-242-8802

BE PREPARED TO PROVIDE THE FOLLOWING INFORMATION:

| | |
|---------------------------|----------------------------|
| Your name | Substance spilled |
| Location/time of spill | Distance spill traveled |
| Estimate rate of spilling | Estimate of amount spilled |

Approved by: _____

Mississippi Department of Transportation – Material Laboratories

Subject: **Spill Reporting Form**

Effective Date:
Issued Date:

Dated _____

Spill Reporting Form

Date:

Person discovering spill: _____ phone number _____

Date of spill discovery: _____

Time of spill discovery: _____

Time of notification: _____

Person notified: _____ phone number _____

What was spilled? _____

Estimated amount of spill: _____

Estimated length of time spill had been occurring before discovery: _____

Emergency response required?: _____

Nature of
Response: _____

Date and time of Response: _____

Resolution of
Spill: _____

Date and Time of Spill Resolution: _____

Corrective
Action: _____

Signature of Discovery Personnel:

Signature of Reporting Personnel:

Signature of Authorized Responsible Personnel certifying clean-up:

Approved by: _____

Mississippi Department of Transportation – Material Laboratories

Subject: **NRC Notification Form**

Effective Date:
Issued Date:

Dated _____

NOTIFICATION FORM FOR REPORTABLE SPILL TO THE NATIONAL RESPONSE CENTER (NRC)*

| INVOLVED PARTIES | |
|----------------------|--|
| (A) Reporting Party | (B) Suspected Responsible Party |
| Names: | Names: |
| Phones: () | Phones: () |
| Company: | Company: |
| Position: Address | Organization Type: State government |
| City: | City: |
| State | State: |
| Zip | Zip: |

INCIDENT DESCRIPTION

Source and/or Cause of Incident: _____ Weather Conditions: _____

Date: ___ / ___ / ___ Time: _____

Cause: _____

Incident Address/Location: _____ Nearest City: _____

Distance from City: _____

Storage Tank Container Type - Aboveground (Y/N) Underground (Y/N) Unknown

Tank Capacity: _____ Facility Capacity: _____

Latitude Degrees: _____ Longitude Degrees: _____ Mile Post or River Mile: _____

MATERIALS

Released Quantity: _____ Released Material: _____

Quantity in Water: _____ Unit of Measure: _____

Approved by:

[Empty rectangular box for signature or stamp]

REMEDIAL ACTION

Actions Taken to Correct or Mitigate Incident: _____

IMPACT

Number of Injuries: _____ Number of Fatalities: _____
Were There Evacuations (Y/N/U)? _ Number Evacuated: _____
Was there any Damage (Y/N/U)? __ Damage in Dollars: _____

ADDITIONAL INFORMATION

Any information about the incident not recorded elsewhere in the report:

CALLER NOTIFICATIONS

EPA STATE USCG OTHER (DESC)

*[This form summarizes information to be reported to NRC. It is not necessary to wait for all information before calling NRC.]

