

REPORT NO. DOT-TSC-OST-72-19

AMBIENT NOISE LEVEL
MEASUREMENTS IN PROPOSED
FLORIDA AIRPORT AREA

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FINAL REPORT

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PREFACE

Measurements were made at ten locations in southern Florida to determine the ambient noise levels existing in the vicinity of the three remaining proposed sites for the "South Florida Regional Airport."

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SUMMARY

Noise data recorded at ten selected locations in southern Florida during the period May 3 to 10 1972 have been analyzed in the DOT/TSC noise abatement laboratory, Cambridge, Massachusetts.

Table I contains a summary of the measured noise levels at each location, expressed as noise levels value exceeded 1, 10, 50, 90, 99 percent of the time in a-weighted decibels. The standard deviation, minimum and maximum A-weighted levels are also tabulated.

TABLE 1. SUMMARY DATA

Loc. No.	Date 1972	Local Time	Temp. °F.	Rel. Humid. %	Baro. Press. MM-Hg.	Wind		Sky	1972 Southern Florida Noise Survey Statistical Noise Data (dBA)						Range	
						Vel.	Dir.		L1	L10	L50	L90	L99	Std. Dev.	Min.	Max.
1	May 3	08:28	79	80	762	0	X	Sunny	65.5	59.8	55.3	51.3	49.1	3.4	47	72
1	May 3	11:46	87	63	755	5-8	SW	Sunny	65.5	59.7	52.3	46.8	44.8	4.9	42	79
1	May 4	00:04	83	86	761.5	0	X	Clear	58.5	49.5	44.6	42.7	41.4	3.3	40	67
2	May 3	10:19	85	78	750	5-10	SW	Sunny	64.6	55.7	50.4	47.6	46.2	3.6	45	74
2	May 3	12:52	93	63	730	5-10	SW	Sunny	74.2	59.8	50.9	47.2	45.4	5.9	44	81
2	May 6	12:07	82	76	767	15	ENE	Cloudy	69.5	60.9	55.7	52.7	51.1	3.7	48	81
2	May 7	15:08	87	76	766	8-12	E	Partly Cloudy	70.7	60.9	54.3	50.6	48.3	4.5	46	83
3	May 4	07:30	72	92	768	0	X	Sunny	72.3	58.2	48.6	44.6	42.6	5.9	41	76
3	May 4	11:15	87	63	755	0-2	Variable	Sunny	75.0	56.6	46.6	40.8	38.9	7.3	37	89
4	May 4	08:42	77	87	751	0	X	Sunny	63.2	54.9	46.3	42.4	40.9	5.0	39	70
4	May 4	13:11	88	67	753	0-3	NW	Sunny	56.8	50.8	45.7	42.2	40.3	3.5	38	63
5	May 4	12:14	86	62	750	2-7	SW	Sunny	74.9	55.2	45.2	40.6	38.5	7.1	36	84
6	May 5	07:30	75	85	765	2	NW	Sunny	66.9	58.2	52.5	49.5	48.2	3.8	46	73
6	May 5	11:28	87	66	757.5	5-10	NNE	Sunny	66.7	61.0	54.3	50.5	48.7	4.1	47	77
6	May 5	11:59	88	65	757.5	5-10	NNE	Sunny	39 Car Freight Train Passing S20° Ft. From Microphone						6.3	85
7	May 5	08:40	79	64	766	1	NW	Sunny	69.2	58.9	54.5	51.1	48.4	3.6	45	74
7	May 5	12:40	90	69	754	2-10	NE	Sunny	72.8	68.6	63.0	51.6	49.0	6.1	46	78
7	May 5	22:25	79	80	768.5	5	ENE	Partly Cloudy	64.2	58.4	50.9	47.4	45.7	4.3	43	76
7	May 5/6	23:58	78	82	768.5	5	ENE	Partly Cloudy	66.1	51.6	44.8	43.0	41.8	4.6	40	83
8	May 8	07:08	78	79	765	1-2	E	Mostly Cloudy	72.9	65.0	59.3	54.3	50.7	4.4	48	86
8	May 8	11:10	87	66	762	0-2	E	Mostly Cloudy	69.8	62.7	56.4	51.2	48.5	4.5	46	80
9	May 8	08:07	84	70	761.5	6-13	ENE	Partly Cloudy	76.1	61.7	56.5	54.2	52.6	4.1	50	90
9	May 8	12:42	87	66	746	8-12	E	Partly Cloudy	67.8	61.2	57.0	54.1	52.1	3.0	50	78
10	May 8	21:34	79	75	764	0	X	Partly Cloudy	75.9	64.1	49.2	42.1	40.4	8.5	40	81
10	May 9	12:40	88	64	730	1-2	SE	Scattered Clouds	79.6	70.6	55.0	46.5	44.1	9.2	41	88
10	May 9	13:20	88	64	730	1-2	SE	Scattered Clouds	83.4	70.3	55.3	47.1	42.1	9.2	40	90
10	May 10	11:55	88	70	762	2-3	SSE	Sunny	81.6	70.6	54.0	46.2	43.2	9.5	40	88

1.0 INTRODUCTION

This report documents the measurements made at ten locations near the three remaining sites being considered for the "South Florida Regional Airport." The actual locations together with the proposed sites are indicated on the map in Appendix F, Figure F-1.

In most cases, measurements were made of approximately 30 minutes duration each during the morning rush hour; the mid-day period; and in the late evening. Broad-band magnetic tape recordings were made of the noise levels at each site and were subsequently analyzed in the laboratory at the DOT Transportation Systems Center in Cambridge, Massachusetts.

The locations are described and events affecting the noise climate during the measurement periods are noted. Time histories (Appendix A) and statistical analyses (Appendix B) of noise levels measured at each location are provided together with a summary of all data obtained.

The equipment and techniques used to measure and analyze the noise levels are described in Appendices D and E.

This report simply records the field measurement results described above. No conclusions or recommendations resulted from this work, and none are included.

1.1 SITE DESCRIPTIONS AND OBSERVATIONS

1.1.1 Location No. 1

This site was located in the Miami Lakes area of Opa-Locka. It was approximately 1,000 feet east of the "Palmetto Expressway" near the corner of "Miami Lakes Road" and "Miami Lakes Drive West." Three runs were made at this site. (Figure C-1)

The first run began at 08:28 on May 3, 1972 and lasted approximately 27 minutes. During a five-minute observation period, 18 vehicles were counted on "Miami Lakes Drive West." A helicopter operating overhead raised the noise level to about 65 dBA at 08:32.

One jet and three prop planes were observed, and a power lawn mower was heard from approximately a block away. The low levels were dominated by the constant flow of rush hour traffic on the "Palmetto Expressway" 1,000 feet away. The median noise level during this period was 55.3 dBA. (See Figure A-1 for time history and B-1 for statistical analysis).

The second run began at 11:46 on May 3, 1972 and lasted approximately 30 minutes. During a five-minute observation period, 13 vehicles were counted on "Miami Lakes Drive West." Nine prop planes flew over and a power saw or similar device was heard about a half block away. The low levels were dominated by the constant flow of traffic on the "Palmetto Expressway" 1,000 feet away. The median noise level during this period was 52.3 dBA, 3 dB lower than measured in the morning at this location (Figures A-2 and B-2).

The third run began at 00:04 on May 4, 1972 and lasted about 30 minutes. During a ten-minute observation period, four vehicles were counted on "Miami Lakes Drive West." Three jet aircraft were observed high overhead. Major fluctuations in the noise level were caused by infrequent trucks on the "Palmetto Expressway." The low levels were dominated by an air conditioner on a home about 350 feet away. The median noise level during this period was 44.6 dBA, 11 dB lower than measured in the morning at this location (Figures A-3 and B-3).

1.1.2 Location No. 2

This site was located in the Miami Lakes Area of Opa-Locka. It was inside the southeast corner of Inner Miami Lakeway and Mahogany Ct. Four runs were made at this site. (Figure C-2).

The first run began at 10:19 on May 3, 1972 and lasted approximately 25 minutes. During a five-minute observation period, 48 vehicles were counted on Ludlam Road which was about 500 feet east of the site. Six aircraft were observed, two of which were helicopters. The low levels were dominated by traffic on Ludlam Road and the "Palmetto Expressway." The median noise level during this period was 50.4 dBA (Figures A-4 and B-4).

The second run began at 12:32 on May 3, 1972 and lasted approximately 27 minutes. During a five-minute observation period, 45 vehicles were counted on Ludlam Road. Seven propeller-driven aircraft were observed, one of which was a two-engine plane and another was a Coast Guard Amphibian. A motorcycle driving by on Ludlam Road raised the noise level to about 73 dBA. The median noise level during this period was 50.9 dBA, 0.5 dB higher than measured in the morning at this location (Figures A-5 and B-5).

The third run began at 12:07 on May 6, 1972 and lasted approximately 25 minutes. During a five-minute observation period, 75 vehicles were counted on Ludlam Road. Seven aircraft were observed. One was a jet and one was a two-engine propeller aircraft. Two motorcycles drove by on Ludlam Road. The low levels were dominated by the almost constant traffic on Ludlam Road 500 feet away. The median noise level during this period was 55.7 dBA, 5.3 dB higher than measured in the morning at this location (Figure B-6).

The fourth run began at 15:08 on May 7 and lasted approximately 34 minutes. During a five-minute observation period, 65 vehicles were counted on Ludlam Road. Fifteen aircraft were observed. One was a two-engine propeller-driven plane, three were Coast Guard Amphibians, one a small private jet, and two commercial jets. Four motorcycles drove by during the run. The low levels were dominated by the almost constant traffic on Ludlam Road. The median noise level during this period was 54.3 dBA. Although there was more aircraft traffic during this run than the Saturday run, the median noise level was 1.4 dB lower than measured on Saturday at this location. The probable reason is that the Ludlam Road vehicle traffic was heavier on Saturday (See Figures A-6 and B-7).

1.1.3 Location No. 3

This site is located in the Sunshine Ranches area of Cooper City. It was approximately four-tenths of a mile north of Stirling Road and eight-tenths of a mile south of Griffin Road on Holatee Trail. Two runs were made at this site (Figure C-3).

The first run began at 07:30 on May 4, 1972 and lasted approximately 30 minutes. Four aircraft were observed, three commercial jets and a four-engine jet. The four-engine jet raised the noise level to a high of 76 dBA. Farm machine or a chain saw was heard near the end of the run, raising the noise level to about 55 dBA. Trucks were heard in the distance coming from the northeast, probably from State Road 818 about a mile away. The low levels were dominated by the constant chatter of birds and occasional call of a rooster. The median noise level during this period was 48.6 dBA (Figures A-7 and B-8).

The second run began at 11:15 on May 4, 1972 and lasted approximately 30 minutes. Five aircraft were observed during the run. One of them was a four-engine propeller-driven aircraft (constellation). Two were small prop planes and were operating high over the site for about 10 minutes. Two farm machines were heard during the run. One rode past the microphone on Holatee Trail. The low noise levels were dominated by bird noises and distant traffic from Griffin Road. The median noise level during this period was 46.6 dBA, 2 dB lower than measured in the morning at this location (Figures A-8 and B-9).

1.1.4 Location No. 4

This site is located on an unidentified dirt road approximately 1,300-feet north of State Road 84 where it intersects Route 823. Two runs were made at this site (Figure C-4).

The first run began at 08:42 on May 4, 1972 and lasted approximately 28 minutes. Two aircraft were observed during the run. One was a two-engine propeller-driven plane. Trucks passing by on State Road 84 were heard during the run. The low levels were dominated by bird noises and moderate traffic on State Road 84. The median noise level during this period was 46.3 dBA (Figures A-9 and B-10).

The second run began at 13:11 on May 4, 1972 and lasted approximately 30 minutes. Only one aircraft was observed, a Boeing 727. Several jet aircraft were heard in the distance to the east

and south. One car passed by the microphone on the dirt road during the run. The low levels were dominated by bird noises and moderate traffic on State Road 84. The median noise level during this period was 45.7 dBA, 0.6 dB lower than measured in the morning at this location (Figures A-10 and B-11).

1.1.5 Location No. 5

This site is located 1,500 feet north of State Road 84 at a point 1.1 miles west of where it intersects Route 823. Only one run was made at this site (Figure C-5).

The morning run was not made because of heavy construction equipment operating in the area. The noontime run was made while the construction workers were eating lunch. Seven aircraft were observed. Five of them were jets and one was a two-engine prop plane. Trucks were heard on State Road 84. The low levels were dominated by the moderate traffic on State Road 84 and a small amount of bird noise. The median noise level during this period was 45.2 dBA (Figures A-11 and B-12).

1.1.6 Location No. 6

This site was located in North Miami, inside the southwest corner of NE 151st Street, and NE 20th Avenue. It was about 520 feet west of the "Florida East Coast Railroad" tracks. Three runs were made at this site (Figure C-6).

The first run began at 07:32 on May 5, 1972 and lasted approximately 29 minutes. During a five-minute observation period, 32 vehicles were counted in the intersection of NE 151st Street and NE 20th Avenue. No aircraft or trains were observed. This was an industrial area with woodworking and sheetmetal shops. Some machinery and pounding noises were heard during the run. The low levels were dominated by rush hour traffic on the Dixie Highway to the west and Biscayne Blvd. to the east. The median noise level during this period was 52.5 dBA (Figures A-12 and B-13).

The second run began at 11:28 on May 5, 1972 and lasted approximately 30 minutes. Nine aircraft were observed. One was a

helicopter and five were jets. Machinery noises and pounding noises were heard coming from the various small manufacturing and repairing facilities in the area. The low levels were dominated by light machine noises coming mostly from the north and east. The median noise level during this period was 54.3 dBA, 1.8 dB higher than measured in the morning at this location (Figures A-13 and B-14).

The third run began at 11:59 on May 5, 1972 and lasted approximately 50 seconds. This was a special run that covered only the time during which a train was traveling north on the "Florida East Coast Railroad" tracks about 520 feet from the microphone. The train consisted of two locomotives and 39 freight cars of various types and sizes. The passage of the train was timed by stop watch at 49 seconds. Using an average car length of 85 feet, the speed of the train was calculated to be 48 miles per hour. A peak noise level of 72 dBA was recorded (Figure A-13).

1.1.7 Location No. 7

This site was located in the North Miami area inside the southwest corner of NE 204th Street and NE 21st Avenue. Four runs were made at this site (Figure C-7).

The first run began at 08:40 on May 5, 1972 and lasted approximately 28 minutes. Five aircraft were observed during the run. Two were two-engine prop planes, one was a jet and one was a Coast Guard Amphibian. During part of the run, a power lawn mower was operating. The low levels were dominated by the rush hour traffic on Interstate 95 which was to the west of the site. The median noise level during this period was 54.5 dBA (Figures A-14 and B-15).

The second run began at 12:40 on May 5, 1972 and lasted 25 minutes. Six aircraft were observed during the run. Four were jet planes and two prop planes. A power lawn edger was being used across the street during most of the run. The low levels were limited by cars and trucks in the distance when the lawn edger noise was not predominant because it was on the east side of the

house. The median noise level during this period of time was 63 dBA, 8.5 dB higher than measured in the morning at this location (Figures A-15 and B-16).

The third run began at 22:22 on May 5, 1972 and lasted approximately 30 minutes. An intermittent cable invalidated all but the first 10 minutes of this run. The first ten minutes is being reported here because most of the noise heard was caused by two groups of children playing at this late hour. One group was across 204th Street (about 20 boys and girls in the 12 to 14 year old group). The other group was about a block away and was a slightly older group. During quiet periods between the children's noises, the low levels were dominated by a lawn sprinkler system running across 21st Avenue. The median noise level during this period was 50.9 dBA, 3.6 dB lower than measured in the morning at this location (Figures A-16 and B-17).

The fourth run began at 23:58 on May 5, 1972 and lasted 30 minutes. Four aircraft and one motorcycle were observed. The children mentioned in the earlier run had dispersed and the lawn sprinkler had been shut off. The low levels were dominated by an airconditioner on a house across 204th Street. The median noise level during this period was 44.8 dBA, 9.7 dB lower than measured in the morning at this site (Figures A-17 and B-18).

1.1.8 Location No. 8

This site was located in the West Miami area near the intersection of SW 107th Avenue and SW 32nd Street. Two runs were made at this site (Figure C-8).

The first run started at 07:08 on May 8, 1972 and lasted approximately 30 minutes. During a five-minute observation period, 86 vehicles were counted on 107th Avenue, about 150 feet east of the microphone. No aircraft were observed. The low levels were dominated by the traffic on 107th Avenue and bird noises. The median noise level during this period was 59.3 dBA (Figures A-18 and B-19).

The second run started at 11:10 on May 8, 1972 and lasted approximately 26 minutes. During a five-minute observation period, 38 vehicles were counted on 107th Avenue. One prop plane was observed during the run. The low levels were dominated by the traffic on 107th Avenue and bird noises. The median noise level during this period was 56.4 dBA, 2.9 dB lower than measured in the morning at this location (Figures A-19 and B-20).

1.1.9 Location No. 9

This site was located in the Miami area near the intersection of NW 76th Avenue, NW 4th Street, and Northwest Blvd. Two runs were made at this site (Figure C-9).

The first run began at 08:07 on May 8, 1972 and lasted approximately 30 minutes. During a five-minute observation period, 641 vehicles were counted on the "Palmetto Expressway" about 600 feet west of the microphone. Sporadic sideline noise from the Miami International Airport was observed. The low levels were dominated by the constant rush hour traffic on the "Palmetto Expressway." The median noise level during this period was 56.5 dBA (Figures A-20 and B-21).

The second run began at 12:42 on May 8, 1972 and lasted approximately 30 minutes. During a five-minute observation period, 409 vehicles were counted on the "Palmetto Expressway." During the run, 19 jet aircraft were observed approaching Miami International Airport, and others were heard taking off. The low levels were dominated by the traffic on the "Palmetto Expressway." The median noise level during this period was 57 dBA. (Figures A-21 and B-22).

1.1.10 Location No. 10

This site was located on NW 97th Avenue, about 780 feet south of NW 25th Street. Four runs were made at this site (Figure C-10).

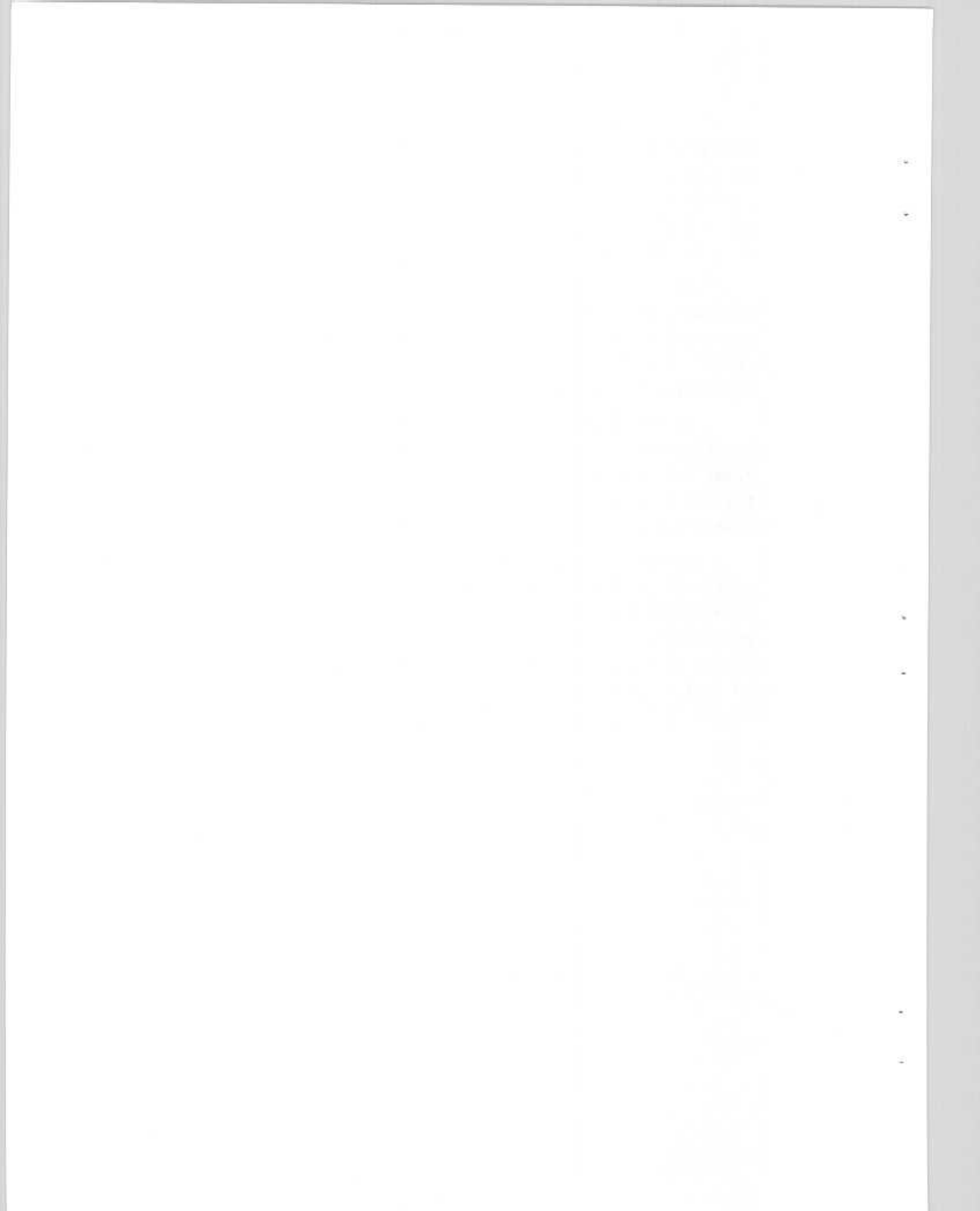
The first run began at 21:54 on May 8, 1972 and lasted approximately 51 minutes. Twenty aircraft were counted approaching Miami International Airport for a landing. Three of them were

prop planes. Between aircraft flyovers, noise from aircraft taking off and other ground noises were sometimes heard. The low levels were dominated by distant traffic on the "Palmetto Expressway" east of the site. The median noise level during this period was 49.2 dBA (Figures A-22 and B-23).

The second run began at 12:40 on May 9, 1972 and lasted approximately 30 minutes. Seventeen aircraft were counted approaching Miami International Airport for a landing. One was a prop plane. The low levels were dominated by traffic on NW 25th Street. The median noise level during this period was 55 dBA (Figure B-24).

The third run began at 13:20 on May 9, 1972 and lasted approximately 28 minutes. Fifteen aircraft were counted approaching Miami International Airport for a landing. Two were prop planes. The low levels were limited by traffic on NW 25th Street. The median noise level during this period was 55.3 dBA (Figure B-25).

The fourth run began at 11:55 on May 10, 1972 and lasted approximately 50 minutes. Thirty-nine aircraft were counted approaching Miami International Airport for a landing. Six were prop planes. Farm machines passed by the microphone three times during the run. The low levels were dominated by traffic on NW 25th Street. The median noise level during this period was 54 dBA (Figures A-23 and B-26).



APPENDIX A
TIME HISTORIES

Note: Full views of Appendix A available with original document.

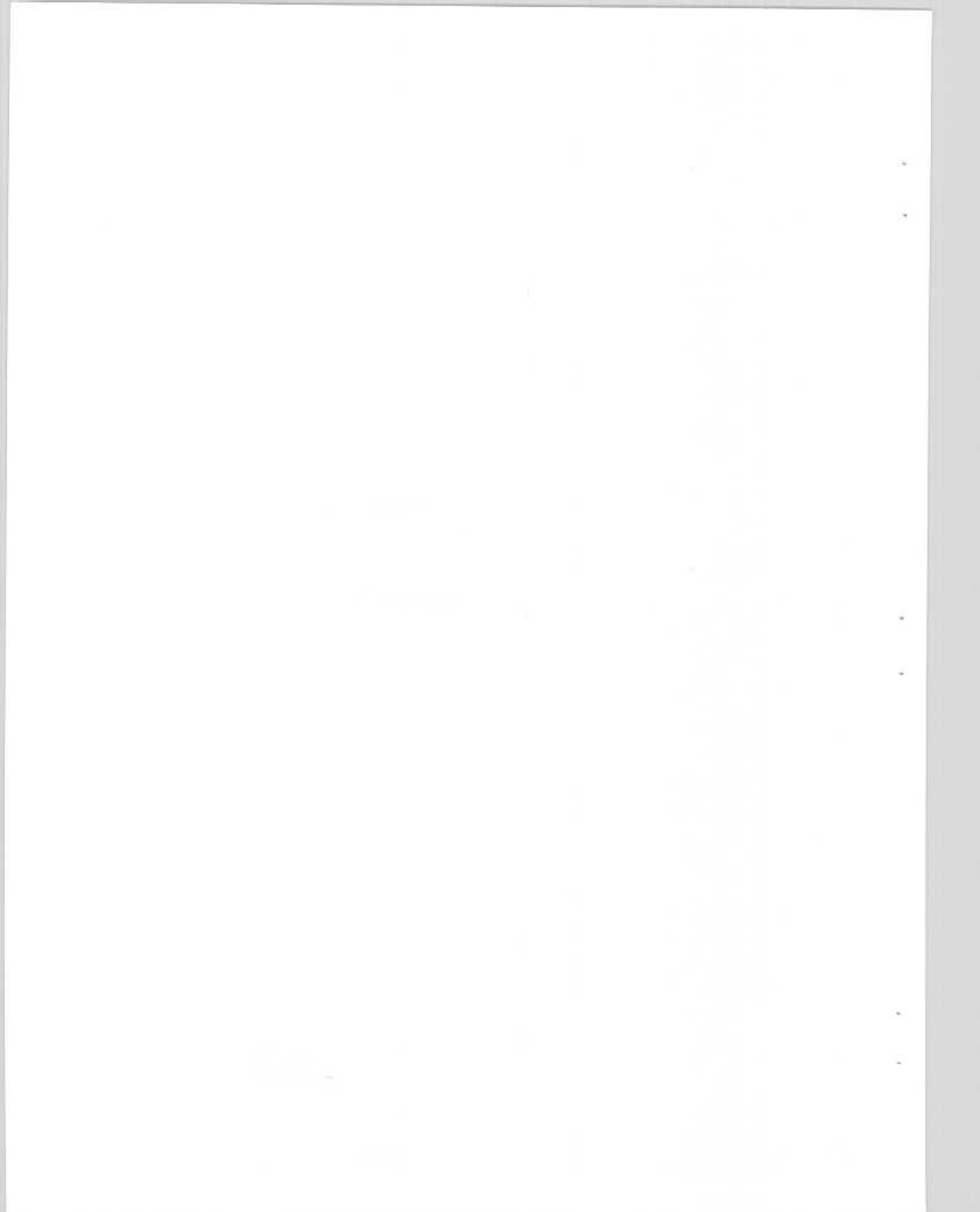
1900

1901

1902

APPENDIX A.

TIME HISTORIES



APPENDIX B

NOISE DATA

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

WED 05/17/72
 14:27

NOISE DATA FROM RUN NO. FL-53-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 3 1972 FROM 08:28 TO 08:57, IN OPA-LOCKA - FLA. LOCATION #1
 (ZONE 17 UNIVERSAL GRID LOCATION 567.9 - 2865.7) *
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)

DISTRI
 BUTION DBA*

2	72	+
10	71	+
14	70	+
21	69	+
21	68	+
25	67	+
19	66	+
37	65	+
52	64	+
91	63	+
142	62	+
262	61	+
484	60	+
743	59	+
906	58	+
1121	57	+
1523	56	+
1400	55	+
1329	54	+
1405	53	+
1352	52	+
1079	51	+
624	50	+
233	49	+
90	48	+
15	47	+
0	46	+

SAMPLES=	13000
AVERAGE=	55 DBA*
STANDARD DEVIATION=	3.4 DBA*
ENERGY MEAN=	56.7 DB**
NOISE POLLUTION LEVEL=	65.4
1% PERCENTILE=	65.5 DBA*
10% DECILE=	59.8 DBA*
MEDIAN=	55.3 DBA*
90% DECILE=	51.3 DBA*
99% PERCENTILE=	49.1 DBA*
WALSH HEALEY EXP.=	0 %
RANGE=	25 DB

LEVEL (DBA*) VS CUMULATIVE DISTRIBUTION (PERCENT)

* ESTIMATED GRID COORDINATES BECAUSE QUADRANGLE MAP NOT AVAILABLE

Figure B-1. Statistical Analysis of Noise Levels at Location 1 During the Morning Run

DIST.	DBA*	0	10	20	30
2	72	0			
10	71	0			
14	70	0			
21	69	0			
21	68	0			
25	67	0			
19	66	0			
37	65	00			
52	64	00			
91	63	00			
142	62	000			
262	61	0000			
484	60	0000000			
743	59	0000000000			
906	58	000000000000			
1121	57	00000000000000			
1523	56	000000000000000000			
1400	55	0000000000000000			
1329	54	0000000000000000			
1405	53	0000000000000000			
1352	52	0000000000000000			
1079	51	00000000000000			
624	50	00000000			
233	49	0000			
90	48	00			
15	47	0			
DIST. DBA*	0		10	20	30

LEVEL (DBA*) VS DISTRIBUTION (PERCENT)

**A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 ***-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF
 THE SQUARES OF THE SOUND PRESSURES.

Figure B-1 (continued). Statistical Analysis of Noise Levels at Location 1
 During the Morning Run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

TUES 05/16/72
 09:52

NOISE DATA FROM RUN NO. FL-54-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 3 1972 FROM 11:36 TO 12:16, IN OPA-LOCKA - FLA. LOCATION #1
 (ZONE 17 UNIVERSAL GRID LOCATION 567.9 - 2865.7) *
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)

DISTRIB
 UTION DBA*

1	79	+
1	78	+
2	77	+
1	76	+
1	75	+
0	74	+
1	73	+
3	72	+
1	71	+
7	70	+
6	69	+
22	68	+
19	67	+
39	66	+
76	65	+
115	64	+
161	63	+
206	62	+
289	61	+
337	60	+
417	59	+
521	58	+
484	57	+
631	56	+
872	55	+
949	54	+
1092	53	+
1204	52	+
989	51	+
1005	50	+
996	49	+
1010	48	+
1105	47	+
994	46	+
473	45	+
138	44	+
30	43	+
2	42	+
0	41	+

SAMPLES= 14200
 AVERAGE= 52.2 DBA*
 STANDARD DEVIATION= 4.9 DBA*
 ENERGY MEAN= 55.8 DB**
 NOISE POLLUTION LEVEL= 68.3
 1% PERCENTILE= 65.5 DBA*
 10% DECILE= 59.7 DBA*
 MEDIAN= 52.3 DBA*
 90% DECILE= 46.8 DBA*
 99% PERCENTILE= 44.8 DBA*
 WALSH HEALEY EXP.= 0 %
 RANGE= 37 DB

LEVEL(DBA*) VS CUMULATIVE DISTRIBUTION (PERCENT)

* ESTIMATED GRID COORDINATES BECAUSE QUADRANGLE MAP NOT AVAILABLE

Figure B-2. Statistical Analysis of Noise Levels at Location 1 During the Mid-Day Run

DIST.	DBA*	0	10	20	30
1	79	0			
1	78	0			
2	77	0			
1	76	0			
1	75	0			
0	74	0			
1	73	0			
3	72	0			
1	71	0			
7	70	0			
6	69	0			
22	68	0			
19	67	0			
39	66	00			
76	65	00			
115	64	00			
161	63	000			
206	62	000			
289	61	0000			
337	60	00000			
417	59	000000			
521	58	0000000			
484	57	000000			
631	56	00000000			
872	55	0000000000			
949	54	00000000000			
1092	53	0000000000000			
1204	52	00000000000000			
989	51	000000000000			
1005	50	000000000000			
996	49	000000000000			
1010	48	000000000000			
1105	47	0000000000000			
994	46	000000000000			
473	45	000000			
138	44	000			
30	43	0			
2	42	0			
DIST.	DBA*	0	10	20	30

LEVEL(DBA*) VS DISTRIBUTION (PERCENT)

*-A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 **-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF
 THE SQUARES OF THE SOUND PRESSURES.

Figure B-2 (Continued). Statistical Analysis of Noise Levels at Location 1
 During the Mid-Day Run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

WED 05/17/72
 14:15

NOISE DATA FROM RUN NO. FL-56-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 4 1972 FROM 00:04 TO 00:34, IN OPA-LOCKA - FLA. LOCATION #1
 (ZONE 17 UNIVERSAL GRID LOCATION 567.9 - 2865.7) *
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)

DISTRI
 BUTION DBA*

1	67	+
1	66	+
2	65	+
8	64	+
8	63	+
3	62	+
11	61	+
24	60	+
57	59	+
53	58	+
76	57	+
77	56	+
105	55	+
84	54	+
147	53	+
175	52	+
189	51	+
261	50	+
338	49	+
387	48	+
575	47	+
1065	46	+
2183	45	+
3454	44	+
3306	43	+
1479	42	+
318	41	+
13	40	+
0	39	+

SAMPLES=	14400
AVERAGE=	45 DBA*
STANDARD DEVIATION=	3.3 DBA*
ENERGY MEAN=	47.3 DB**
NOISE POLLUTION LEVEL=	55.7
1% PERCENTILE=	58.5 DBA*
10% DECILE=	49.5 DBA*
MEDIAN=	44.6 DBA*
90% DECILE=	42.7 DBA*
99% PERCENTILE=	41.4 DBA*
WALSH HEALEY EXP.=	0 %
RANGE=	27 DB

LEVEL (DBA*) VS CUMULATIVE DISTRIBUTION (PERCENT)

* ESTIMATED GRID COORDINATES BECAUSE QUADRANGLE MAP NOT AVAILABLE

Figure B-3. Statistical Analysis of Noise Levels at Location 1 During the Late Evening run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

TUES 05/16/72
 09:36

NOISE DATA FROM RUN NO. FL-53-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 3 1972 FROM 10:19 TO 10:44 IN OPA-LOCKA-FLA. LOCATION#2 ✕
 (ZONE 17 UNIVERSAL GRID LOCATION 569.2 - 2865.4 .)
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)

DISTRIB
 UTION DBA*

4	74	+
2	73	+
0	72	+
4	71	+
4	70	+
5	69	+
13	68	+
27	67	+
28	66	+
23	65	+
26	64	+
21	63	+
48	62	+
67	61	+
74	60	+
103	59	+
134	58	+
168	57	+
315	56	+
400	55	+
502	54	+
766	53	+
1025	52	+
1194	51	+
1640	50	+
1804	49	+
1813	48	+
1371	47	+
378	46	+
60	45	+
0	44	+

SAMPLES=	12019
AVERAGE=	50.7 DBA*
STANDARD DEVIATION=	3.6 DBA*
ENERGY MEAN=	53.4 DB**
NOISE POLLUTION LEVEL=	62.6
1% PERCENTILE=	64.6 DBA*
10% DECILE=	55.7 DBA*
MEDIAN=	50.4 DBA*
90% DECILE=	47.6 DBA*
99% PERCENTILE=	46.2 DBA*
WALSH HEALEY EXP.=	0 %
RANGE=	29 DB

LEVEL(DBA*) VS CUMULATIVE DISTRIBUTION (PERCENT)

✕ ESTIMATED GRID COORDINATES BECAUSE QUADRANGLE MAP NOT AVAILABLE

Figure B-4. Statistical Analysis of Noise Levels at Location 2 During the Morning Run

DIST.	DBA*	0	10	20	30
		LEVEL(DBA*) VS DISTRIBUTION (PERCENT)			
4	74	0			
2	73	0			
0	72	0			
4	71	0			
4	70	0			
5	69	0			
13	68	0			
27	67	0			
28	66	0			
23	65	0			
26	64	0			
21	63	0			
48	62	00			
67	61	00			
74	60	00			
103	59	00			
134	58	000			
168	57	000			
315	56	00000			
400	55	000000			
502	54	0000000			
766	53	0000000000			
1025	52	00000000000000			
1194	51	0000000000000000			
1640	50	00000000000000000000			
1804	49	0000000000000000000000			
1813	48	0000000000000000000000			
1371	47	000000000000000000			
378	46	000000			
60	45	00			

*-A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 **-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF THE SQUARES OF THE SOUND PRESSURES.

Figure B-4 (Continued). Statistical Analysis of Noise Levels at Location 2 During the Morning Run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

WED 05/17/72
 13:30

NOISE DATA FROM RUN NO. FL-54-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 3 1972 FROM 12:32 TO 12:59, IN OPA-LOCKA - FLA. LOCATION #2
 (ZONE 17. UNIVERSAL GRID LOCATION 564.9 - 2865.4 .) ✖
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)

DISTRIB
 UTION DBA*

4	81	+
3	80	+
2	79	+
12	78	+
14	77	+
23	76	+
24	75	+
67	74	+
116	73	+
47	72	+
57	71	+
47	70	+
46	69	+
48	68	+
64	67	+
74	66	+
80	65	+
60	64	+
89	63	+
141	62	+
153	61	+
131	60	+
196	59	+
236	58	+
314	57	+
414	56	+
541	55	+
668	54	+
858	53	+
967	52	+
1109	51	+
1290	50	+
1566	49	+
1453	48	+
1297	47	+
844	46	+
253	45	+
31	44	+
0	43	+

SAMPLES=	13339
AVERAGE=	52.1 DBA*
STANDARD DEVIATION=	5.9 DBA*
ENERGY MEAN=	60.3 DB**
NOISE POLLUTION LEVEL=	75.4
1% PERCENTILE=	74.2 DBA*
10% DECILE=	59.8 DBA*
MEDIAN=	50.9 DBA*
90% DECILE=	47.2 DBA*
99% PERCENTILE=	45.4 DBA*
WALSH HEALEY EXP.=	0 %
RANGE=	37 DB

LEVEL(DBA*) VS CUMULATIVE DISTRIBUTION (PERCENT)

✖ ESTIMATED GRID COORDINATES BECAUSE QUADRANGLE MAP NOT AVAILABLE

Figure B-5. Statistical Analysis of Noise Levels at Location 2 During the Mid-Day Run

4	81	0			
3	80	0			
2	79	0			
12	78	0			
14	77	0			
23	76	0			
24	75	0			
67	74	00			
116	73	00			
47	72	00			
57	71	00			
47	70	00			
46	69	00			
48	68	00			
64	67	00			
74	66	00			
80	65	00			
60	64	00			
89	63	00			
141	62	000			
153	61	000			
131	60	000			
196	59	000			
236	58	0000			
314	57	00000			
414	56	000000			
541	55	0000000			
668	54	000000000			
858	53	00000000000			
967	52	000000000000			
1109	51	00000000000000			
1290	50	0000000000000000			
1566	49	000000000000000000			
1453	48	000000000000000000			
1297	47	000000000000000000			
844	46	00000000000			
253	45	0000			
31	44	0			
DIST. DBA*	0		10	20	30
			LEVEL(DBA*) VS DISTRIBUTION (PERCENT)		

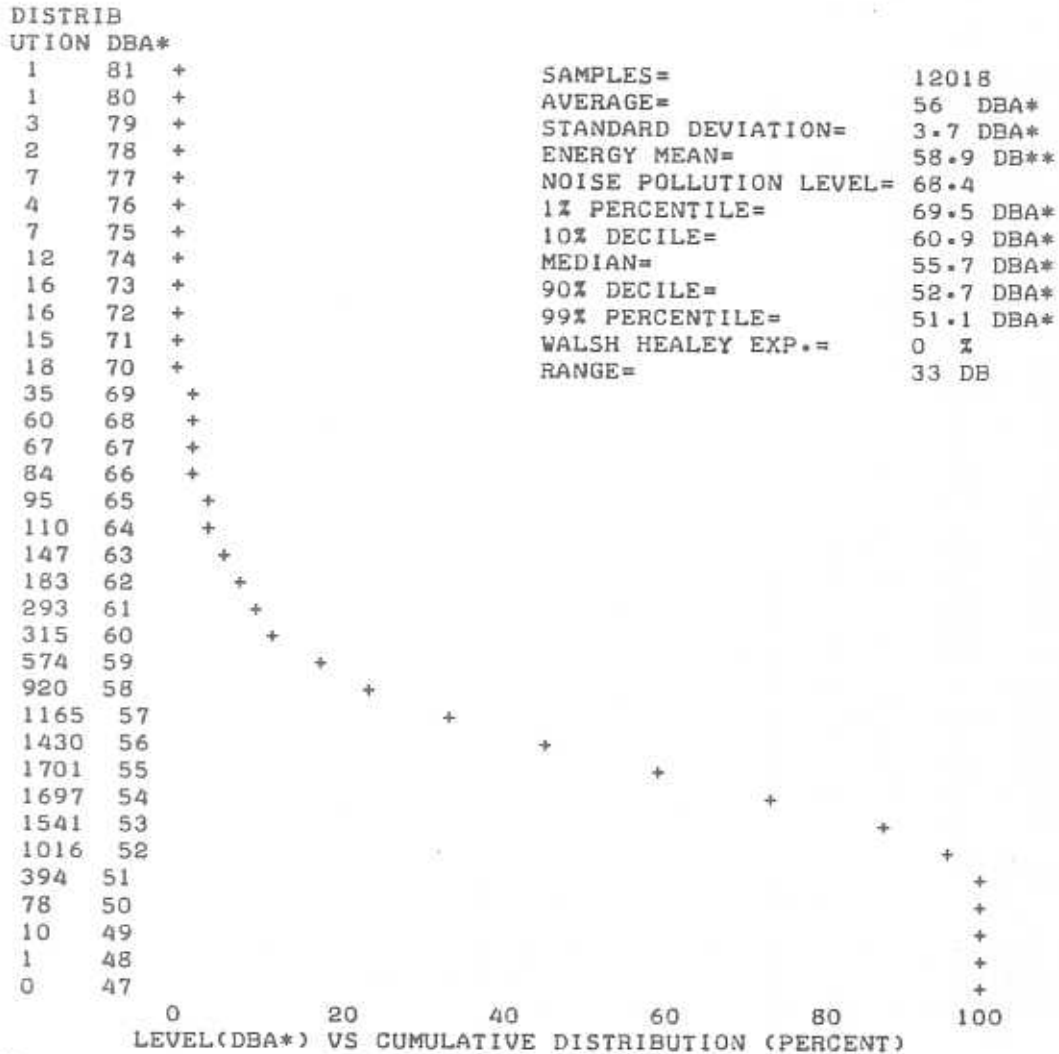
*-A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 **-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF
 THE SQUARES OF THE SOUND PRESSURES.

Figure B-5 (Continued). Statistical Analysis of Noise Levels at Location 2
 During the Mid-Day Run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

TUES 05/16/72
 12:41

NOISE DATA FROM RUN NO. FL-59-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 6 1972 FROM 12:07 TO 12:32, IN OPA-LOCKA -FLA. LOCATION #2 ✓
 (ZONE 17 UNIVERSAL GRID LOCATION 569.2 - 2865.4 .)
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)



✓ ESTIMATED GRID COORDINATES BECAUSE QUADRANGLE MAP NOT AVAILABLE

Figure B-6. Statistical Analysis of Noise Levels at Location 2 During the Saturday Run

DIST.	DBA*	0	10	20	30
1	81	0			
1	80	0			
3	79	0			
2	78	0			
7	77	0			
4	76	0			
7	75	0			
12	74	0			
16	73	0			
16	72	0			
15	71	0			
18	70	0			
35	69	00			
60	68	00			
67	67	00			
84	66	00			
95	65	00			
110	64	00			
147	63	000			
183	62	000			
293	61	00000			
315	60	00000			
574	59	00000000			
920	58	00000000000000			
1165	57	0000000000000000			
1430	56	000000000000000000			
1701	55	00000000000000000000			
1697	54	00000000000000000000			
1541	53	00000000000000000000			
1016	52	0000000000000000			
394	51	000000			
78	50	00			
10	49	0			
1	48	0			
DIST.	DBA*	0	10	20	30

LEVEL(DBA*) VS DISTRIBUTION (PERCENT)

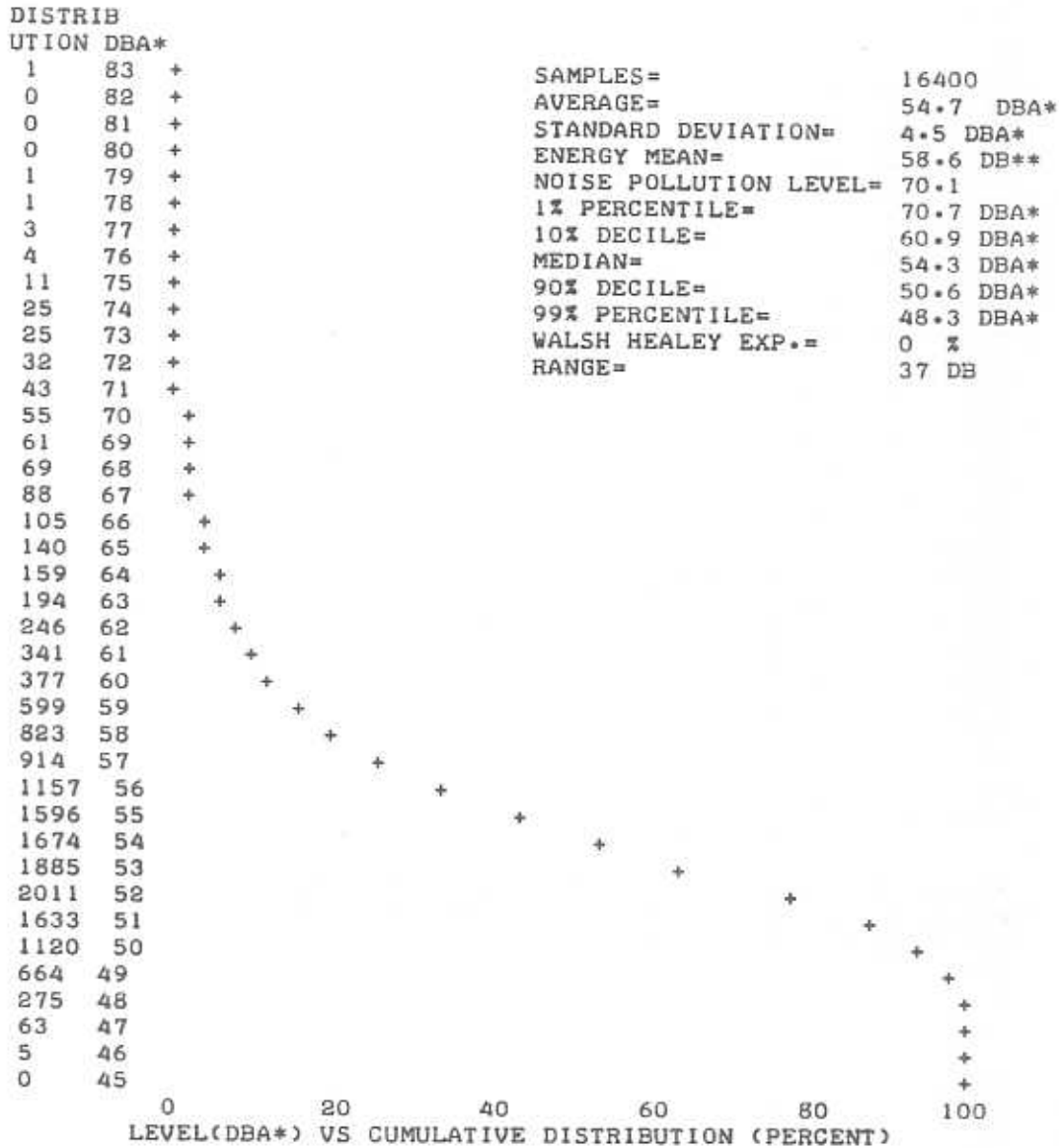
*-A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 **-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF
 THE SQUARES OF THE SOUND PRESSURES.

Figure B-6 (Continued). Statistical Analysis of Noise Levels at Location 2
 During the Saturday Run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

TUES 05/16/72
 13:31

NOISE DATA FROM RUN NO. FL-59-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 7 1972 FROM 15:08 TO 15:43, IN OPA-LOCKA - FLA. LOCATION #2
 (ZONE 17 UNIVERSAL GRID LOCATION 569.2 - 2865.4 .) $\frac{1}{8}$
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)



$\frac{1}{8}$ ESTIMATED GRID COORDINATES BECAUSE QUADRANGLE MAP NOT AVAILABLE

Figure B-7. Statistical Analysis of Noise Levels at Location 2 During the Sunday Run

1	83	0			
0	82	0			
0	81	0			
0	80	0			
1	79	0			
1	78	0			
3	77	0			
4	76	0			
11	75	0			
25	74	0			
25	73	0			
32	72	0			
43	71	0			
55	70	00			
61	69	00			
69	68	00			
88	67	00			
105	66	00			
140	65	00			
159	64	000			
194	63	000			
246	62	000			
341	61	0000			
377	60	00000			
599	59	0000000			
823	58	000000000			
914	57	000000000			
1157	56	00000000000			
1596	55	000000000000000			
1674	54	000000000000000			
1885	53	0000000000000000			
2011	52	00000000000000000			
1633	51	000000000000000			
1120	50	00000000000			
664	49	0000000			
275	48	0000			
63	47	00			
5	46	0			
DIST. DBA*	0		10	20	30

LEVEL(DBA*) VS DISTRIBUTION (PERCENT)

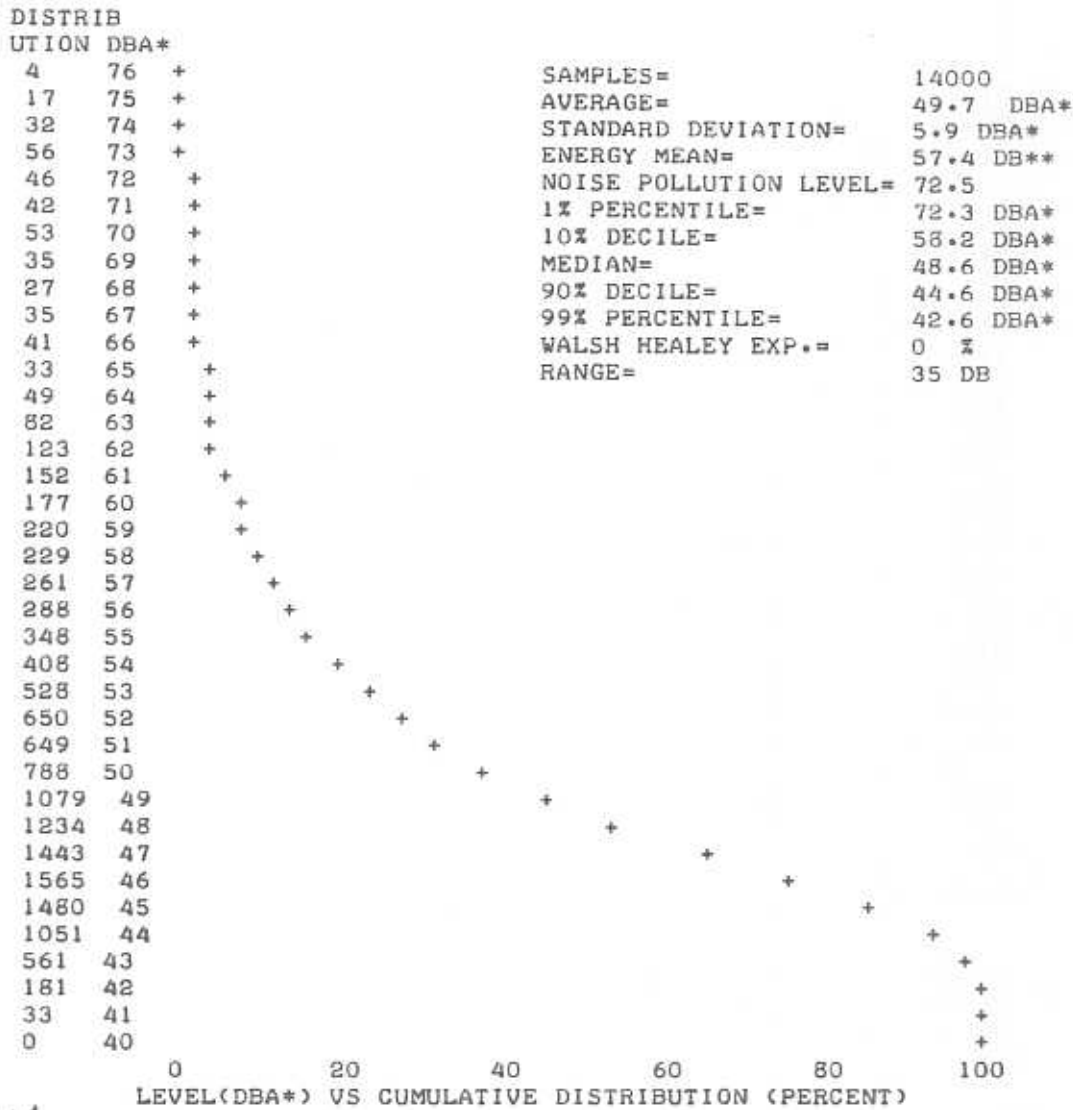
**A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 **-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF
 THE SQUARES OF THE SOUND PRESSURES.

Figure B-7 (Continued). Statistical Analysis of Noise Levels at Location 2
 During the Sunday Run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

MON 05/15/72
 13:42

NOISE DATA FROM RUN NO. FL-51-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 4 1972 FROM 07:30 TO 08:00, IN COOPER CITY - FLA. LOCATION #3
 (ZONE 17 UNIVERSAL GRID LOCATION 566.1 - 2881.2 *)
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)



* ESTIMATED GRID COORDINATES BECAUSE QUADRANGLE MAP NOT AVAILABLE

Figure B-8. Statistical Analysis of Noise Levels at Location 3 During the Morning Run

(RUN NO. FL-51-72-2A CONTINUED)

MON 05/15/72

4	76	0			
17	75	0			
32	74	0			
56	73	00			
46	72	00			
42	71	00			
53	70	00			
35	69	0			
27	68	0			
35	67	0			
41	66	00			
33	65	0			
49	64	00			
82	63	00			
123	62	00			
152	61	000			
177	60	000			
220	59	000			
229	58	0000			
261	57	0000			
288	56	0000			
348	55	00000			
408	54	00000			
528	53	0000000			
650	52	00000000			
649	51	00000000			
788	50	0000000000			
1079	49	000000000000			
1234	48	00000000000000			
1443	47	0000000000000000			
1565	46	000000000000000000			
1480	45	000000000000000000			
1051	44	000000000000			
561	43	0000000			
181	42	000			
33	41	0			
DIST. DBA*	0		10	20	30
			LEVEL(DBA*) VS DISTRIBUTION (PERCENT)		

*-A WEIGHTED DECIBELS-RE, 20 MICRONEWTONS PER SQUARE METER
 **-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF
 THE SQUARES OF THE SOUND PRESSURES.

Figure B-8 (Continued). Statistical Analysis of Noise Levels at Location 3
 During the Morning Run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

WED 05/17/72
 15:43

NOISE DATA FROM RUN NO. FL-52-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 4 1972 FROM 11:15 TO 11:45, IN COOPER CITY - FLA. LOCATION #3
 (ZONE 17 UNIVERSAL GRID LOCATION 566.1 - 2881.2) *
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)

DISTRIB
 UTION DBA*

3	89	+
11	88	+
9	87	+
7	86	+
3	85	+
3	84	+
4	83	+
3	82	+
7	81	+
9	80	+
5	79	+
20	78	+
15	77	+
17	76	+
24	75	+
23	74	+
23	73	+
38	72	+
37	71	+
41	70	+
41	69	+
38	68	+
47	67	+
35	66	+
44	65	+
40	64	+
36	63	+
63	62	+
80	61	+
90	60	+
107	59	+
161	58	+
198	57	+
246	56	+
336	55	+
378	54	+
482	53	+
623	52	+
577	51	+
638	50	+
709	49	+
676	48	+
673	47	+
752	46	+
755	45	+
806	44	+
1043	43	+
1184	42	+
1178	41	+
1026	40	+
384	39	+
130	38	+
20	37	+
0	36	+

SAMPLES=	13898
AVERAGE=	47.6 DBA*
STANDARD DEVIATION=	7.3 DBA*
ENERGY MEAN=	63.4 DB**
NOISE POLLUTION LEVEL=	82.1
1% PERCENTILE=	75 DBA*
10% DECILE=	56.6 DBA*
MEDIAN=	46.6 DBA*
90% DECILE=	40.8 DBA*
99% PERCENTILE=	38.9 DBA*
WALSH HEALEY EXP.=	0 %
RANGE=	52 DB

* ESTIMATED GRID COORDINATES BECAUSE QUADRANGLE MAP NOT AVAILABLE

Figure B-9. Statistical Analysis of Noise Levels at Location 3 During the Mid-Day Run

3	89	0			
11	88	0			
9	87	0			
7	86	0			
3	85	0			
3	84	0			
4	83	0			
3	82	0			
7	81	0			
9	80	0			
5	79	0			
20	78	0			
15	77	0			
17	76	0			
24	75	0			
23	74	0			
23	73	0			
38	72	00			
37	71	0			
41	70	00			
41	69	00			
38	68	00			
47	67	00			
35	66	0			
44	65	00			
40	64	00			
36	63	0			
63	62	00			
80	61	00			
90	60	00			
107	59	00			
161	58	000			
198	57	000			
246	56	0000			
336	55	00000			
378	54	00000			
482	53	000000			
623	52	00000000			
577	51	0000000			
638	50	00000000			
709	49	000000000			
676	48	00000000			
673	47	00000000			
752	46	000000000			
755	45	000000000			
806	44	0000000000			
1043	43	000000000000			
1184	42	00000000000000			
1178	41	000000000000000			
1026	40	0000000000000			
384	39	00000			
130	38	000			
20	37	0			
DIST.	DBA*	0	10	20	30
LEVEL(DBA*) VS DISTRIBUTION (PERCENT)					

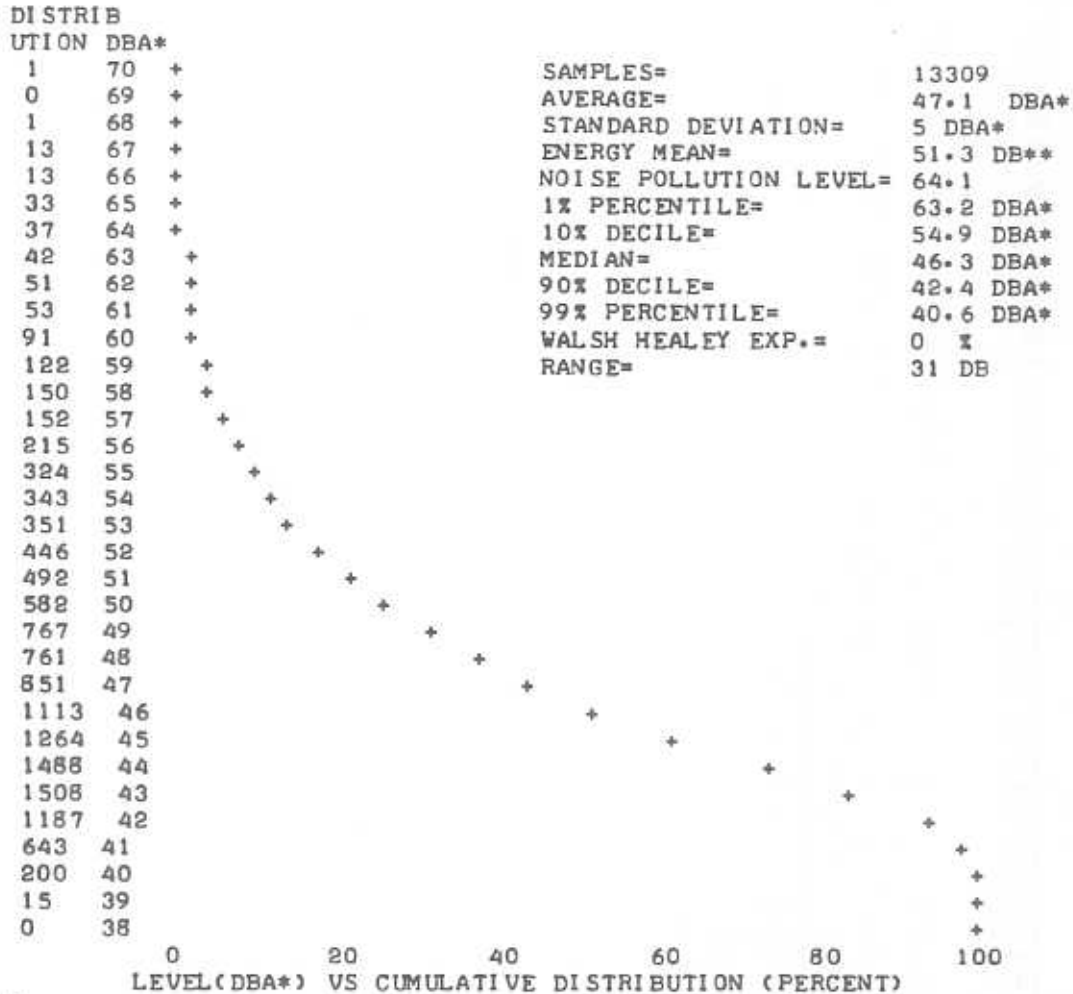
**A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 **-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF
 THE SQUARES OF THE SOUND PRESSURES.

Figure B-9 (Continued). Statistical Analysis of Noise Levels at Location 3
 During the Mid-Day Run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

WED 05/17/72
 15:02

NOISE DATA FROM RUN NO. FL-51-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 4 1972 FROM 08:42 TO 09:10, IN FT. LAUDERDALE - FLA. LOCATION #4
 (ZONE 17 UNIVERSAL GRID LOCATION 567.2 - 2889.2 *)
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)



* ESTIMATED GRID COORDINATES BECAUSE QUADRANGLE MAP NOT AVAILABLE

Figure B-10. Statistical Analysis of Noise Levels at Location 4 During the Morning Run

1	70	0			
0	69	0			
1	68	0			
13	67	0			
13	66	0			
33	65	0			
37	64	00			
42	63	00			
51	62	00			
53	61	00			
91	60	00			
122	59	00			
150	58	000			
152	57	000			
215	56	0000			
324	55	00000			
343	54	00000			
351	53	00000			
446	52	000000			
492	51	0000000			
582	50	00000000			
767	49	0000000000			
761	48	0000000000			
851	47	00000000000			
1113	46	00000000000000			
1264	45	000000000000000			
1488	44	000000000000000000			
1508	43	000000000000000000			
1187	42	0000000000000000			
643	41	00000000			
200	40	000			
15	39	0			
DIST. DBA*	0		10	20	30
			LEVEL(DBA*) VS DISTRIBUTION (PERCENT)		

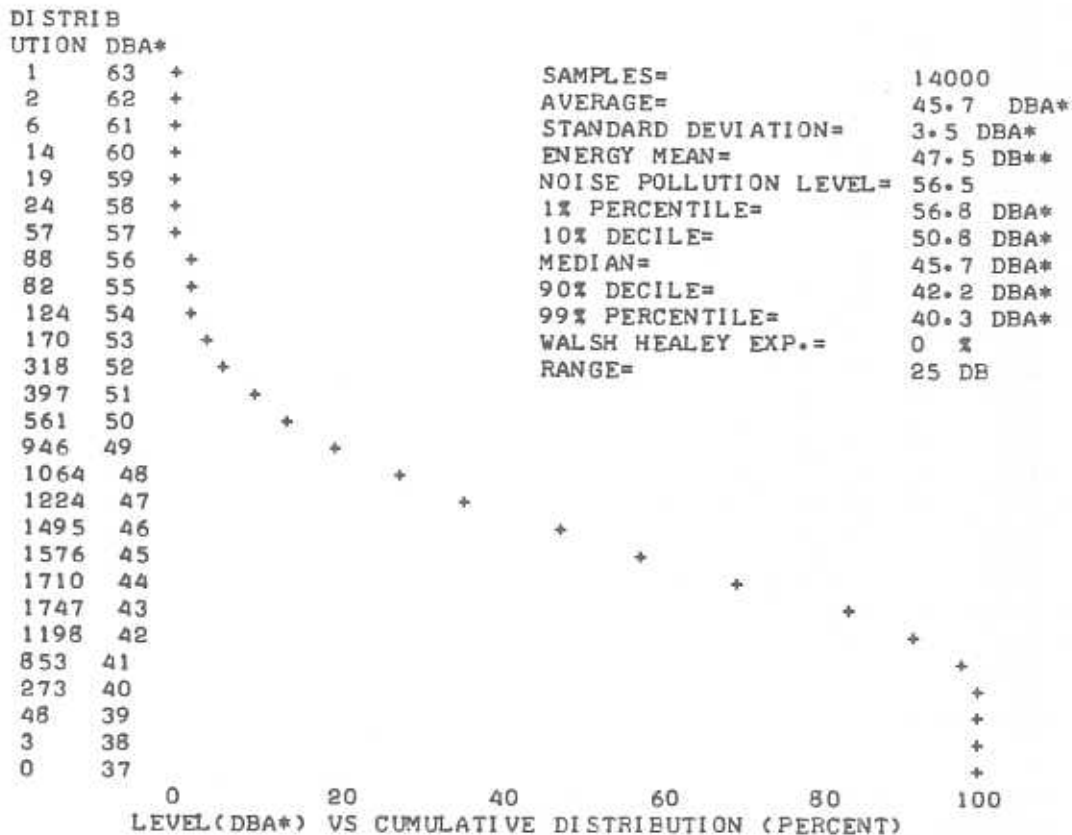
*-A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 **-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF
 THE SQUARES OF THE SOUND PRESSURES.

Figure B-10 (Continued). Statistical Analysis of Noise Levels at Location 4
 During the Morning Run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

WED 05/17/72
 16:09

NOISE DATA FROM RUN NO. FL-57-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 4 1972 FROM 13:11 TO 13:41, IN FT. LAUDERDALE - FLA. LOCATION #4
 (ZONE 17 UNIVERSAL GRID LOCATION 567.2 - 2889.2 *)
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)



* ESTIMATED GRID COORDINATES BECAUSE QUADRANGLE MAP NOT AVAILABLE

Figure B-11. Statistical Analysis of Noise Levels at Location 4 During the Mid-Day Run

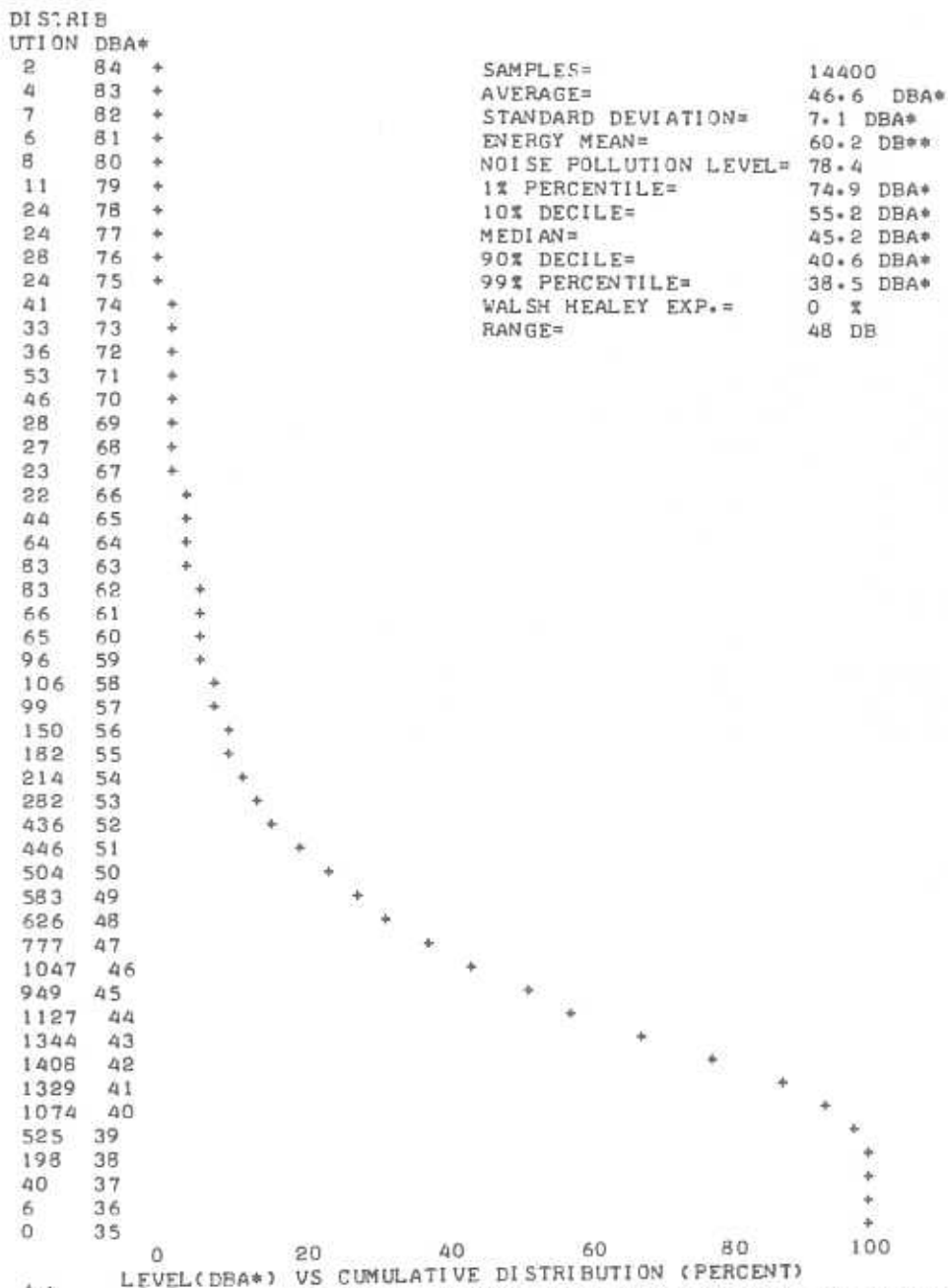
1	63	0			
2	62	0			
6	61	0			
14	60	0			
19	59	0			
24	58	0			
57	57	00			
88	56	00			
82	55	00			
124	54	00			
170	53	000			
318	52	00000			
397	51	00000			
561	50	0000000			
946	49	00000000000			
1064	48	000000000000			
1224	47	00000000000000			
1495	46	0000000000000000			
1576	45	00000000000000000			
1710	44	000000000000000000			
1747	43	0000000000000000000			
1198	42	00000000000000			
853	41	0000000000			
273	40	0000			
48	39	00			
3	38	0			
DIST. DBA*	0		10	20	30

LEVEL(DBA*) VS DISTRIBUTION (PERCENT)

*-A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 **-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF
 THE SQUARES OF THE SOUND PRESSURES.

Figure B-11 (Continued). Statistical Analysis of Noise Levels at Location 4
 During the Mid-Day Run

NOISE DATA FROM RUN NO. FL-52-72-2A OF THE PORTABLE NOISE STATION
 MAY 4 1972 FROM 12:14 TO 12:44, IN FT. LAUDERDALE - FLA. LOCATION #5
 (ZONE 17 UNIVERSAL GRID LOCATION 565.3 - 2889.8) *
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)



* ESTIMATED GRID COORDINATES BECAUSE QUADRANGLE MAP NOT AVAILABLE

Figure B-12. Statistical Analysis of Noise Levels at Location 5 During the Mid-Day Run

2	84	0
4	83	0
7	82	0
6	81	0
3	80	0
11	79	0
24	79	0
24	77	0
28	76	0
24	75	0
41	74	00
33	73	0
36	72	0
53	71	00
46	70	00
28	69	0
27	68	0
23	67	0
22	66	0
44	65	00
64	64	00
83	63	00
83	62	00
66	61	00
65	60	00
96	59	00
106	58	00
99	57	00
150	56	000
182	55	000
214	54	000
282	53	0000
436	52	000000
446	51	000000
504	50	000000
583	49	0000000
626	48	00000000
777	47	000000000
1047	46	00000000000
949	45	00000000000
1127	44	0000000000000
1344	43	00000000000000
1408	42	000000000000000
1329	41	00000000000000
1074	40	000000000000
525	39	0000000
198	38	000
40	37	00
6	36	0
DIST. DBA*	0	
	10	
	20	
	30	
	LEVEL(DBA*) VS. DISTRIBUTION (PERCENT)	

**A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 ***-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF
 THE SQUARES OF THE SOUND PRESSURES.

Figure B-12 (Continued). Statistical Analysis of Noise Levels at Location 5
 During the Mid-Day run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

WED 05/17/72
 16:17

NOISE DATA FROM RUN NO. FL-50-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 5 1972 FROM 07:32 TO 08:01, IN NORTH MIAMI - FLA. LOCATION #6
 (ZONE 17 UNIVERSAL GRID LOCATION 584.11 - 2871.78 *)
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)

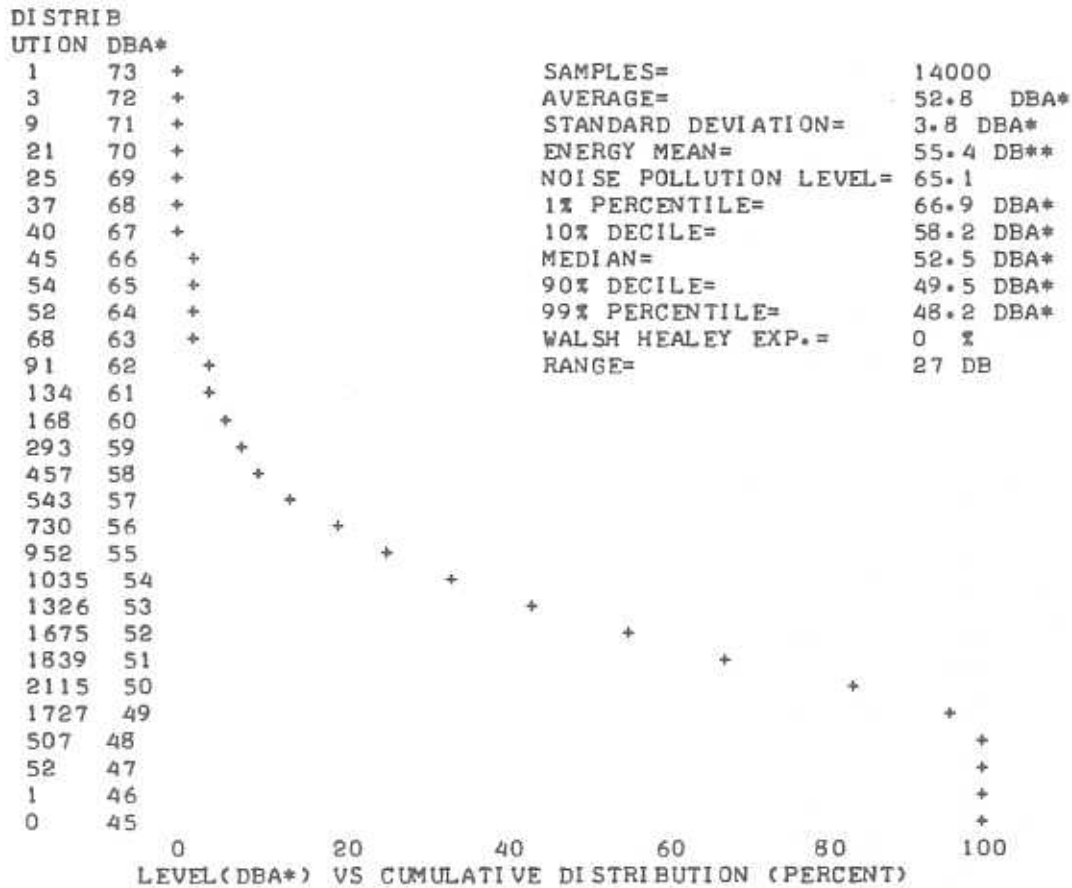


Figure B-13. Statistical Analysis of Noise Levels at Location 6 During the Morning Run

1	73	0			
3	72	0			
9	71	0			
21	70	0			
25	69	0			
37	68	0			
40	67	00			
45	66	00			
54	65	00			
52	64	00			
68	63	00			
91	62	00			
134	61	000			
168	60	000			
293	59	0000			
457	58	000000			
543	57	0000000			
730	56	000000000			
952	55	00000000000			
1035	54	000000000000			
1326	53	00000000000000			
1675	52	00000000000000000			
1839	51	000000000000000000			
2115	50	00000000000000000000			
1727	49	000000000000000000			
507	48	0000000			
52	47	00			
1	46	0			
DIST. DBA*	0		10	20	30

LEVEL(DBA*) VS DISTRIBUTION (PERCENT)

*-A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 **-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF
 THE SQUARES OF THE SOUND PRESSURES.

Figure B-13 (Continued). Statistical Analysis of Noise Levels at Location 6 During the Morning Run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

MON 05/15/72
 15:21

NOISE DATA FROM RUN NO. FL-55-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 5 1972 FROM 11:28 TO 11:57, IN NORTH MIAMI - FLA. LOCATION #6
 (ZONE 17 UNIVERSAL GRID LOCATION 584.11 - 2871.78 .)
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)

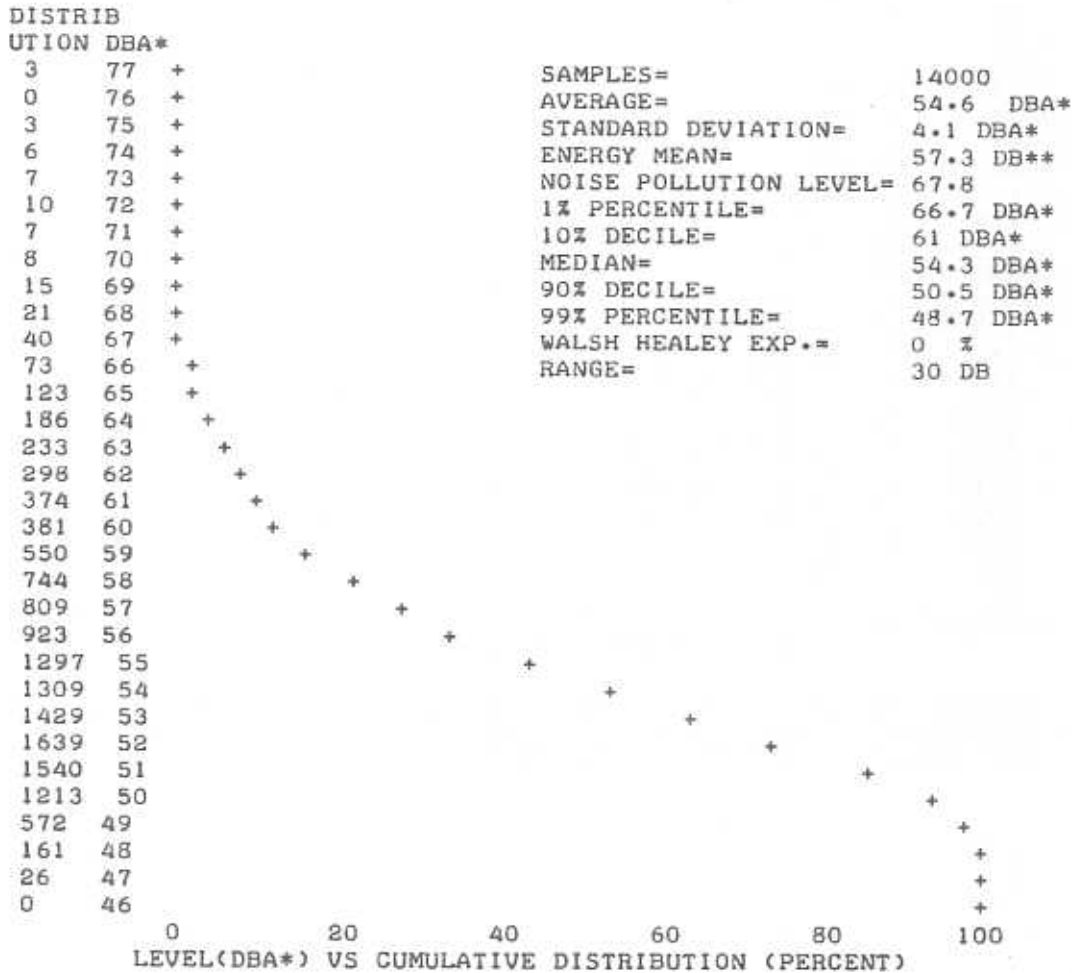


Figure B-14. Statistical Analysis of Noise Levels at Location 6 During the Mid-Day Run

DIST.	DBA*	0	10	20	30
3	77	0			
0	76	0			
3	75	0			
6	74	0			
7	73	0			
10	72	0			
7	71	0			
8	70	0			
15	69	0			
21	68	0			
40	67	00			
73	66	00			
123	65	00			
186	64	000			
233	63	0000			
298	62	0000			
374	61	00000			
381	60	00000			
550	59	0000000			
744	58	000000000			
809	57	000000000			
923	56	0000000000			
1297	55	000000000000000			
1309	54	000000000000000			
1429	53	000000000000000			
1639	52	00000000000000000			
1540	51	00000000000000000			
1213	50	000000000000000			
572	49	0000000			
161	48	000			
26	47	0			

LEVEL(DBA*) VS DISTRIBUTION (PERCENT)

*-A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 **-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF
 THE SQUARES OF THE SOUND PRESSURES.

Figure B-14 (Continued). Statistical Analysis of Noise Levels at Location 6 During the Mid-Day Run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

THUR 05/18/72
 08:25

NOISE DATA FROM RUN NO. FL-50-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 5 1972 FROM 08:40 TO 09:08, IN NORTH MIAMI - FLA. LOCATION #7
 (ZONE 17 UNIVERSAL GRID LOCATION 584.11 - 2871.78 .)
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)

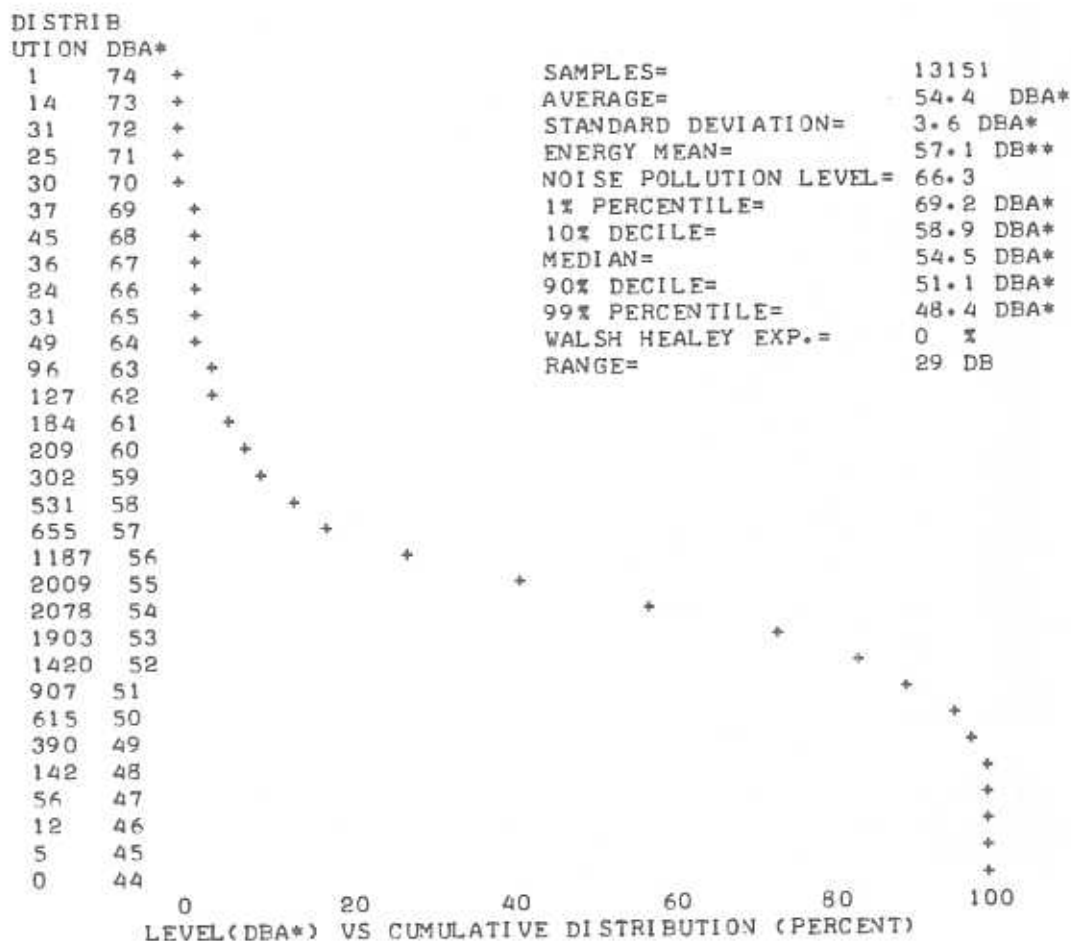


Figure B-15. Statistical Analysis of Noise Levels at Location 7 During the Morning Run

1	74	0			
14	73	0			
31	72	0			
25	71	0			
30	70	0			
37	69	00			
45	68	00			
36	67	00			
24	66	0			
31	65	0			
49	64	00			
96	63	00			
127	62	000			
184	61	000			
209	60	000			
302	59	00000			
531	58	0000000			
655	57	000000000			
1187	56	000000000000000			
2009	55	0000000000000000000000000000000			
2078	54	0000000000000000000000000000000			
1903	53	0000000000000000000000000000000			
1420	52	0000000000000000000000000000000			
907	51	00000000000			
615	50	00000000			
390	49	000000			
142	48	000			
56	47	00			
12	46	0			
5	45	0			
DIST. DBA*	0		10	20	30

LEVEL(DBA*) VS DISTRIBUTION (PERCENT)

*-A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 **-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF THE SQUARES OF THE SOUND PRESSURES.

Figure B-15 (Continued). Statistical Analysis of Noise Levels at Location 7 During the Morning Run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

THUR 05/18/72
 08:35

NOISE DATA FROM RUN NO. FL-55-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 5 1972 FROM 12:40 TO 13:06, IN NORTH MIAMI - FLA. LOCATION #7
 (ZONE 17 UNIVERSAL GRID LOCATION 584.11 - 2871.78 .)
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)

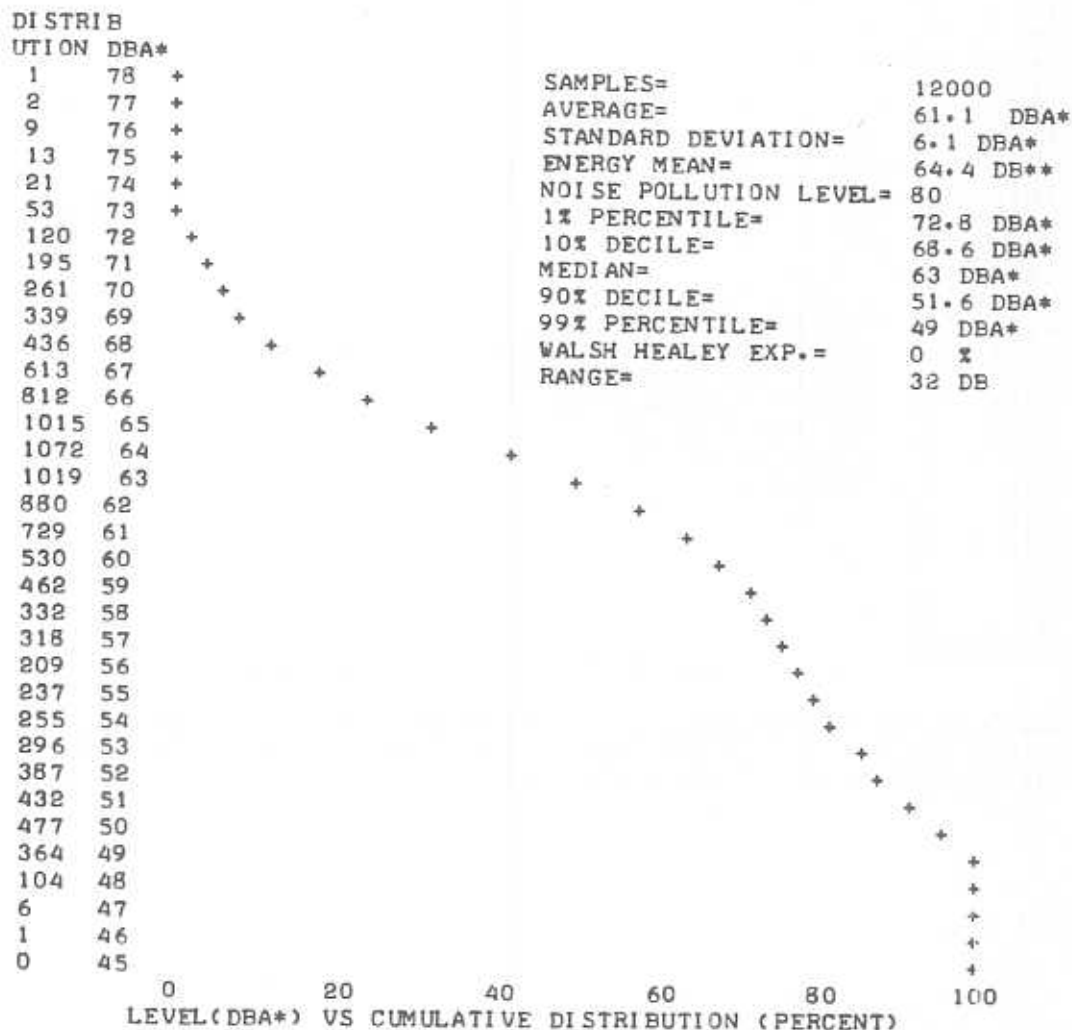


Figure B-16. Statistical Analysis of Noise Levels at Location 7 During the Mid-Day Run

(RUN NO. FL-55-72-2A CONTINUED)

THUR 05/18/72

1	78	0			
2	77	0			
9	76	0			
13	75	0			
21	74	0			
53	73	00			
120	72	000			
195	71	0000			
261	70	0000			
339	69	00000			
436	68	0000000			
613	67	000000000			
812	66	00000000000			
1015	65	0000000000000			
1072	64	0000000000000			
1019	63	0000000000000			
880	62	00000000000			
729	61	000000000			
530	60	00000000			
462	59	0000000			
332	58	00000			
318	57	00000			
209	56	0000			
237	55	0000			
255	54	0000			
296	53	00000			
387	52	000000			
432	51	000000			
477	50	0000000			
364	49	000000			
104	48	00			
6	47	0			
1	46	0			
DIST. DBA*	0		10	20	30

LEVEL(DBA*) VS DISTRIBUTION (PERCENT)

*-A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 **-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF
 THE SQUARES OF THE SOUND PRESSURES.

Figure B-16 (Continued). Statistical Analysis of Noise Levels at Location 7
 During the Mid-Day Run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

TUES 05/16/72
 12:28

NOISE DATA FROM RUN NO. FL-56-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 5 1972 FROM 22:25 TO 22:45, IN NORTH MIAMI - FLA. LOCATION #7
 (ZONE 17 UNIVERSAL GRID LOCATION 584.11 - 2871.78 .)
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)

DISTRIB

UTION DBA*

1	76	+
1	75	+
0	74	+
2	73	+
1	72	+
0	71	+
2	70	+
3	69	+
1	68	+
4	67	+
8	66	+
9	65	+
16	64	+
26	63	+
29	62	+
50	61	+
86	60	+
120	59	+
154	58	+
168	57	+
189	56	+
226	55	+
181	54	+
222	53	+
318	52	+
358	51	+
538	50	+
589	49	+
478	48	+
434	47	+
227	46	+
54	45	+
7	44	+
2	43	+
0	42	+

SAMPLES=	4506
AVERAGE=	51.5 DBA*
STANDARD DEVIATION=	4.3 DBA*
ENERGY MEAN=	54.7 DB**
NOISE POLLUTION LEVEL=	65.7
1% PERCENTILE=	64.2 DBA*
10% DECILE=	58.4 DBA*
MEDIAN=	50.9 DBA*
90% DECILE=	47.4 DBA*
99% PERCENTILE=	45.7 DBA*
WALSH HEALEY EXP.=	0 %
RANGE=	33 DB

LEVEL(DBA*) VS CUMULATIVE DISTRIBUTION (PERCENT)

Figure B-17. Statistical Analysis of Noise Levels at Location 7 During the Evening Run

1	76	0			
1	75	0			
0	74	0			
2	73	0			
1	72	0			
0	71	0			
2	70	0			
3	69	0			
1	68	0			
4	67	0			
8	66	0			
9	65	0			
16	64	00			
28	63	00			
29	62	00			
50	61	000			
86	60	0000			
120	59	00000			
154	58	000000			
168	57	0000000			
189	56	0000000			
226	55	00000000			
181	54	0000000			
222	53	00000000			
318	52	00000000000			
358	51	0000000000000			
538	50	0000000000000000000			
589	49	00000000000000000000			
478	48	00000000000000000			
434	47	00000000000000000			
227	46	000000000			
54	45	000			
7	44	0			
2	43	0			
DIST. DBA*	0		10	20	30

LEVEL(DBA*) VS DISTRIBUTION (PERCENT)

*-A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 **-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF
 THE SQUARES OF THE SOUND PRESSURES.

Figure B-17 (Continued). Statistical Analysis of Noise Levels at Location 7 During the Evening Run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

TUES 05/16/72
 13:43

NOISE DATA FROM RUN NO. FL-58-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 5/6 1972 FROM 23:58 TO 00:28, IN NORTH MIAMI - FLA. LOCATION #7
 (ZONE 17 UNIVERSAL GRID LOCATION 584.11 - 2871.78 .)
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)

DISTRIB
 UTION DBA*

1	83	+
0	82	+
1	81	+
2	80	+
1	79	+
8	78	+
2	77	+
3	76	+
2	75	+
3	74	+
4	73	+
6	72	+
15	71	+
13	70	+
20	69	+
29	68	+
17	67	+
14	66	+
17	65	+
24	64	+
24	63	+
43	62	+
54	61	+
56	60	+
80	59	+
108	58	+
95	57	+
98	56	+
125	55	+
127	54	+
144	53	+
185	52	+
178	51	+
223	50	+
366	49	+
441	48	+
658	47	+
1253	46	+
1957	45	+
2993	44	+
3207	43	+
1229	42	+
166	41	+
8	40	+
0	39	+

SAMPLES=	14000
AVERAGE=	45.8 DBA*
STANDARD DEVIATION=	4.6 DBA*
ENERGY MEAN=	54 DB**
NOISE POLLUTION LEVEL=	65.8
1% PERCENTILE=	66.1 DBA*
10% DECILE=	51.6 DBA*
MEDIAN=	44.8 DBA*
90% DECILE=	43 DBA*
99% PERCENTILE=	41.8 DBA*
WALSH HEALEY EXP.=	0 %
RANGE=	43 DB

0 20 40 60 80 100
 LEVEL(DBA*) VS CUMULATIVE DISTRIBUTION (PERCENT)

Figure B-18. Statistical Analysis of Noise Levels at Location 7 During the Late Evening Run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

TUES 05/16/72
 14:07

NOISE DATA FROM RUN NO. FL-60-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 8 1972 FROM 07:08 TO 07:38, IN WEST MIAMI - FLA. LOCATION #8
 (ZONE 17 UNIVERSAL GRID LOCATION 563.36 - 3846.79 .)
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)

DISTRIB
 UTION DBA*

1	86	+
0	85	+
1	84	+
0	83	+
1	82	+
2	81	+
3	80	+
9	79	+
11	78	+
16	77	+
9	76	+
13	75	+
35	74	+
35	73	+
47	72	+
62	71	+
82	70	+
113	69	+
129	68	+
180	67	+
272	66	+
357	65	+
542	64	+
697	63	+
999	62	+
1235	61	+
1144	60	+
1420	59	+
1533	58	+
1237	57	+
1031	56	+
929	55	+
628	54	+
477	53	+
386	52	+
191	51	+
124	50	+
47	49	+
2	48	+
0	47	+

SAMPLES= 14000
 AVERAGE= 59.1 DBA*
 STANDARD DEVIATION= 4.4 DBA*
 ENERGY MEAN= 62.3 DB**
 NOISE POLLUTION LEVEL= 73.6
 1% PERCENTILE= 72.9 DBA*
 10% DECILE= 65 DBA*
 MEDIAN= 59.3 DBA*
 90% DECILE= 54.3 DBA*
 99% PERCENTILE= 50.7 DBA*
 WALSH HEALEY EXP.= 0 %
 RANGE= 38 DB

LEVEL(DBA*) VS CUMULATIVE DISTRIBUTION (PERCENT)

Figure B-19. Statistical Analysis of Noise Levels at Location 8 During the Morning Run

1	86	0			
0	85	0			
1	84	0			
0	83	0			
1	82	0			
2	81	0			
3	80	0			
9	79	0			
11	78	0			
16	77	0			
9	76	0			
13	75	0			
35	74	0			
35	73	0			
47	72	00			
62	71	00			
82	70	00			
113	69	00			
129	68	00			
180	67	000			
272	66	0000			
357	65	00000			
542	64	0000000			
697	63	000000000			
999	62	0000000000000			
1235	61	000000000000000			
1144	60	000000000000000			
1420	59	00000000000000000			
1533	58	0000000000000000000			
1237	57	00000000000000000			
1031	56	000000000000000			
929	55	000000000000000			
628	54	000000000			
477	53	0000000			
386	52	000000			
191	51	000			
124	50	00			
47	49	00			
2	48	0			
DIST. DBA*	0		10	20	30

LEVEL(DBA*) VS DISTRIBUTION (PERCENT)

*-A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 **-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF
 THE SQUARES OF THE SOUND PRESSURES.

Figure B-19 (Continued). Statistical Analysis of Noise Levels at Location 8
 During the Morning Run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

WED 05/17/72
 16:26

NOISE DATA FROM RUN NO. FL-61-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 8 1972 FROM 11:10 TO 11:37, IN WEST MIAMI - FLA. LOCATION #8
 (ZONE 17 UNIVERSAL GRID LOCATION 536.36 - 3846.79 .)
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)

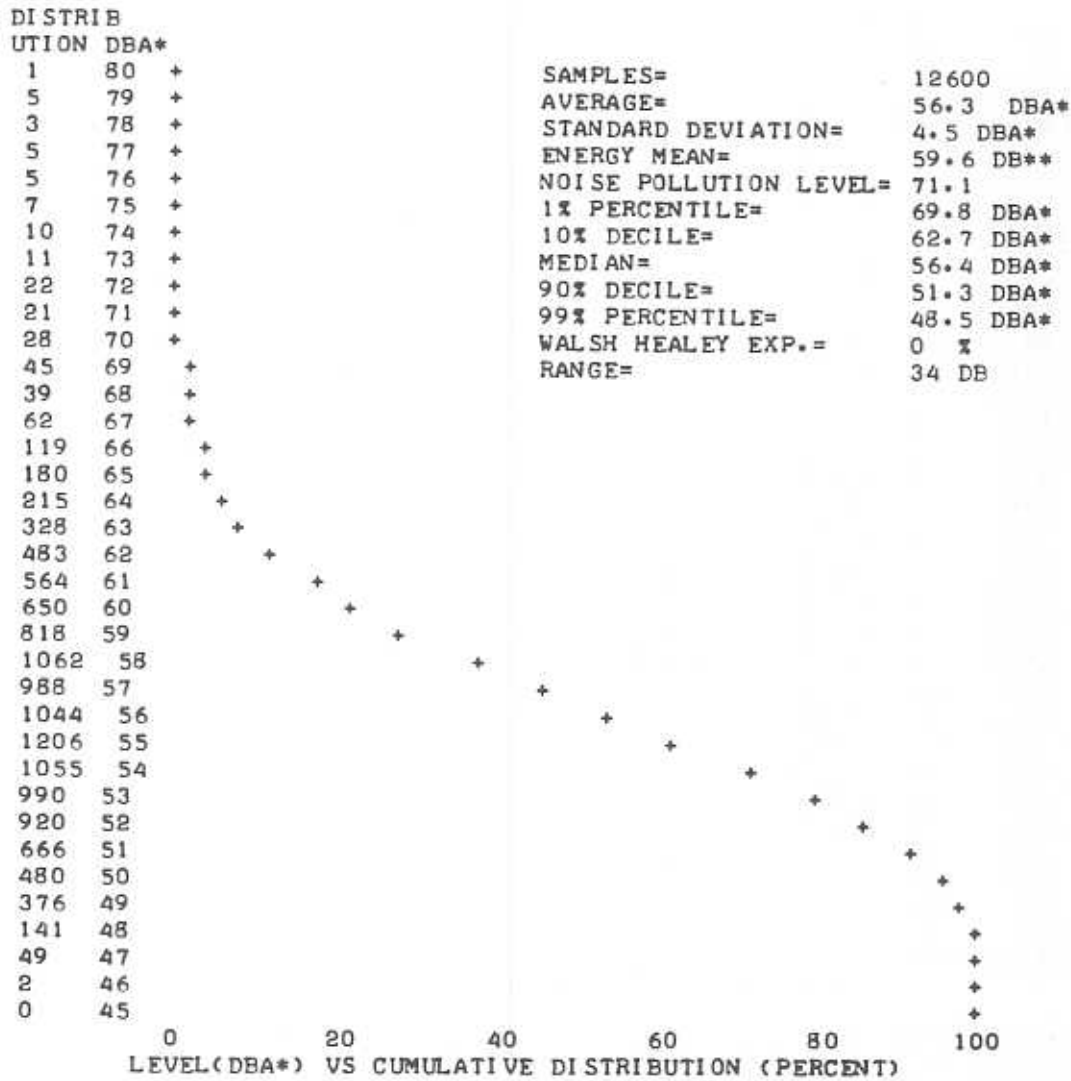


Figure B-20. Statistical Analysis of Noise Levels at Location 8 During the Mid-Day Run

1	80	0			
5	79	0			
3	78	0			
5	77	0			
5	76	0			
7	75	0			
10	74	0			
11	73	0			
22	72	0			
21	71	0			
28	70	0			
45	69	00			
39	68	00			
62	67	00			
119	66	000			
180	65	000			
215	64	0000			
328	63	00000			
483	62	0000000			
564	61	00000000			
650	60	000000000			
818	59	0000000000			
1062	58	00000000000000			
988	57	0000000000000			
1044	56	00000000000000			
1206	55	000000000000000			
1055	54	00000000000000			
990	53	0000000000000			
920	52	0000000000000			
666	51	000000000			
480	50	0000000			
376	49	000000			
141	48	000			
49	47	00			
2	46	0			
DIST. DRA*	0		10	20	30

LEVEL(DBA*) VS DISTRIBUTION (PERCENT)

*-A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 **-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF
 THE SQUARES OF THE SOUND PRESSURES.

Figure B-20 (Continued). Statistical Analysis of Noise Levels at Location 8
 During the Mid-Day Run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

TUE 05/16/72
 16:16

NOISE DATA FROM RUN NO. FL-60-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 8 1972 FROM 08:07 TO 08:37, IN MIAMI - FLA. LOCATION #9
 (ZONE 17 UNIVERSAL GRID LOCATION 567.33 - 2850.7 .)
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)

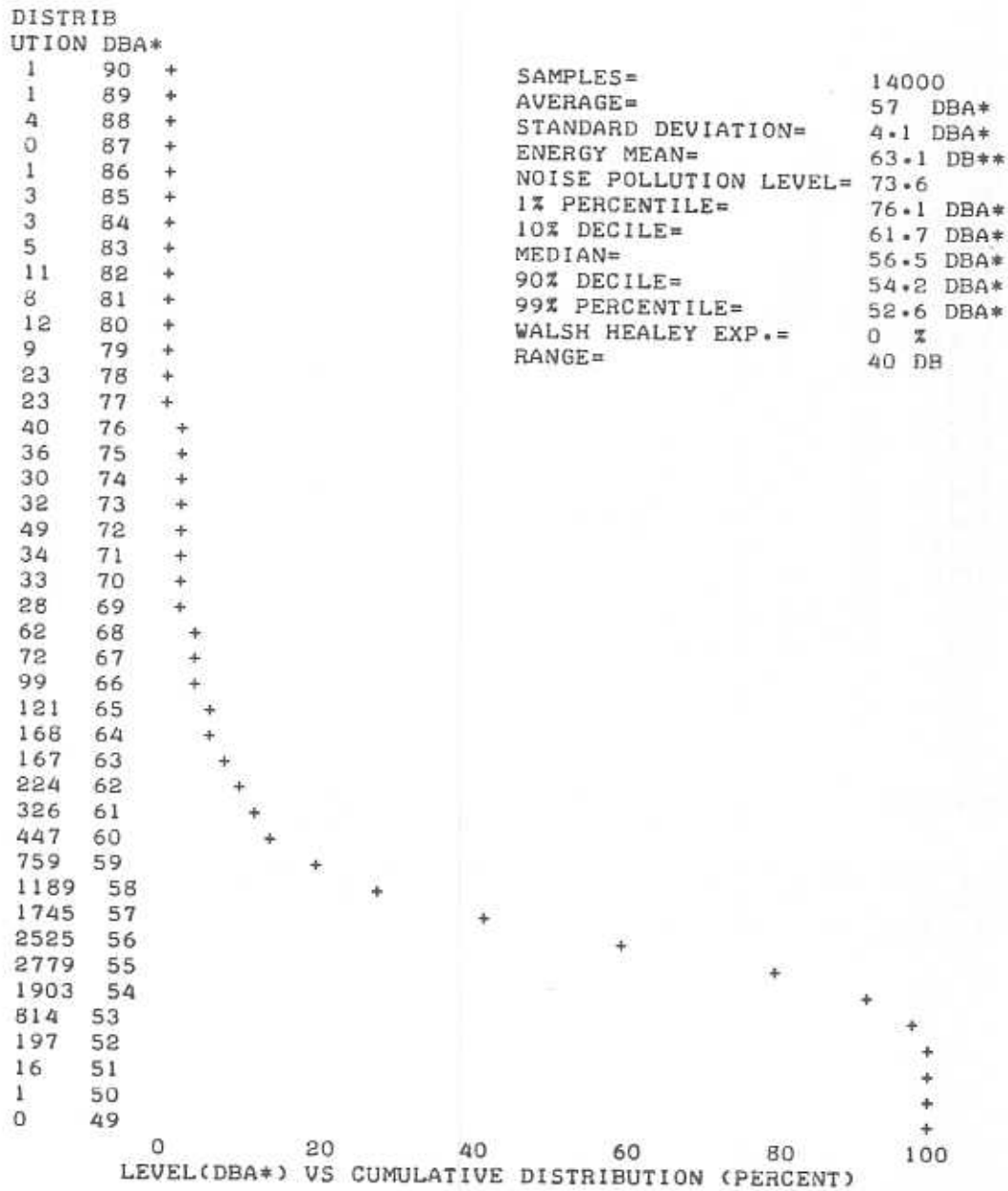


Figure B-21. Statistical Analysis of Noise Levels at Location 9 During the Morning Run

DIST.	DBA*	0	10	20	30
1	90	0			
1	89	0			
4	88	0			
0	87	0			
1	86	0			
3	85	0			
3	84	0			
5	83	0			
11	82	0			
8	81	0			
12	80	0			
9	79	0			
23	78	0			
23	77	0			
40	76	00			
36	75	0			
30	74	0			
32	73	0			
49	72	00			
34	71	0			
33	70	0			
28	69	0			
62	68	00			
72	67	00			
99	66	00			
121	65	00			
168	64	000			
167	63	000			
224	62	000			
326	61	00000			
447	60	000000			
759	59	000000000			
1189	58	000000000000000			
1745	57	0000000000000000000			
2525	56	0000000000000000000000000			
2779	55	00000000000000000000000000000			
1903	54	0000000000000000000000000			
814	53	0000000000			
197	52	000			
16	51	0			
1	50	0			

LEVEL(DBA*) VS DISTRIBUTION (PERCENT)

*-A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 **-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF THE SQUARES OF THE SOUND PRESSURES.

Figure B-21. (Continued). Statistical Analysis of Noise Levels at Location 9 During the Morning Run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

THUR 05/18/72
 08:44

NOISE DATA FROM RUN NO. FL-61-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 8 1972 FROM 12:42 TO 13:12, IN MIAMI - FLA. LOCATION #9
 (ZONE 17 UNIVERSAL GRID LOCATION 567.33 - 2850.7.)
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)

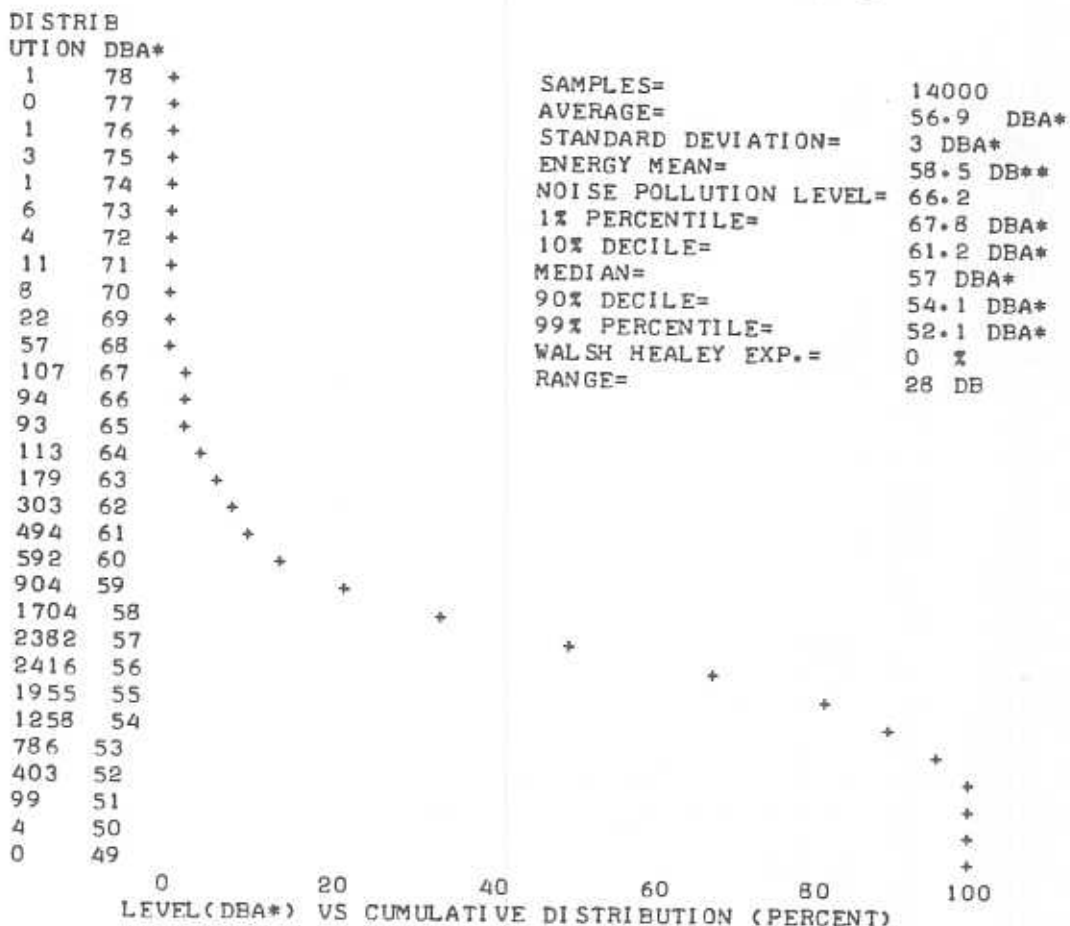


Figure B-22. Statistical Analysis of Noise Levels at Location 9 During the Mid-Day Run

1	78	0			
0	77	0			
1	76	0			
3	75	0			
1	74	0			
6	73	0			
4	72	0			
11	71	0			
8	70	0			
22	69	0			
57	68	00			
107	67	00			
94	66	00			
93	65	00			
113	64	00			
179	63	000			
303	62	0000			
494	61	000000			
592	60	0000000			
904	59	0000000000			
1704	58	000000000000000000			
2382	57	0000000000000000000000			
2416	56	000000000000000000000000			
1955	55	0000000000000000000000			
1258	54	0000000000000000			
786	53	0000000000			
403	52	00000			
99	51	00			
4	50	0			
DIST. DBA*	0		10	20	30
			LEVEL(DBA*) VS DISTRIBUTION (PERCENT)		

*-A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 **-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF
 THE SQUARES OF THE SOUND PRESSURES.

Figure B-22 (Continued). Statistical Analysis of Noise Levels at Location 9
 During the Mid-Day Run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

FRI 05/19/72
 12:58

NOISE DATA FROM RUN NO. FL-63-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 8 1972 FROM 21:54 TO 22:54, IN WEST MIAMI - FLA. LOCATION #10
 (ZONE 17 UNIVERSAL GRID LOCATION 564.82 - 2852.84 .)
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)

DISTRIBUTION DBA*

1	81	+
9	80	+
22	79	+
53	78	+
84	77	+
98	76	+
126	75	+
121	74	+
135	73	+
158	72	+
167	71	+
148	70	+
191	69	+
222	68	+
268	67	+
335	66	+
361	65	+
326	64	+
372	63	+
411	62	+
367	61	+
332	60	+
378	59	+
518	58	+
494	57	+
518	56	+
574	55	+
644	54	+
800	53	+
937	52	+
1189	51	+
1877	50	+
2236	49	+
1450	48	+
1080	47	+
1064	46	+
1202	45	+
1379	44	+
2087	43	+
2548	42	+
1995	41	+
668	40	+
50	39	+
5	38	+
0	37	+

SAMPLES= 28000
 AVERAGE= 50.3 DBA*
 STANDARD DEVIATION= 8.5 DBA*
 ENERGY MEAN= 61.8 DB**
 NOISE POLLUTION LEVEL= 83.6
 1% PERCENTILE= 75.9 DBA*
 10% DECILE= 64.1 DBA*
 MEDIAN= 49.2 DBA*
 90% DECILE= 42 DBA*
 99% PERCENTILE= 40.3 DBA*
 WALSH HEALEY EXP.= 0 %
 RANGE= 43 DB

LEVEL (DBA*) VS CUMULATIVE DISTRIBUTION (PERCENT)

Figure B-23. Statistical Analysis of Noise Levels at Location 10 During the Evening Run

1	81	0			
9	80	0			
22	79	0			
53	78	0			
84	77	00			
98	76	00			
126	75	00			
121	74	00			
135	73	00			
158	72	00			
167	71	00			
148	70	00			
191	69	00			
222	68	00			
268	67	000			
335	66	000			
361	65	000			
326	64	000			
372	63	000			
411	62	000			
367	61	000			
332	60	000			
378	59	000			
518	58	0000			
494	57	0000			
518	56	0000			
574	55	0000			
644	54	00000			
800	53	00000			
937	52	000000			
1189	51	0000000			
1877	50	00000000000			
2236	49	0000000000000			
1450	48	000000000			
1080	47	0000000			
1064	46	0000000			
1202	45	00000000			
1379	44	00000000			
2087	43	000000000000			
2548	42	000000000000000			
1995	41	000000000000			
668	40	00000			
50	39	0			
5	38	0			
DIST. DBA*	0		10	20	30
LEVEL(DBA*) VS DISTRIBUTION (PERCENT)					

*-A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 **-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF
 THE SQUARES OF THE SOUND PRESSURES.

Figure B-23 (Continued). Statistical Analysis of Noise Levels at Location 10
 During the Evening Run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

THUR 05/18/72
 10:01

NOISE DATA FROM RUN NO. FL-62-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 9 1972 FROM 12:40 TO 13:10, IN WEST MIAMI - FLA. LOCATION #10
 (ZONE 17 UNIVERSAL GRID LOCATION 564.82 - 2852.84 .)
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)

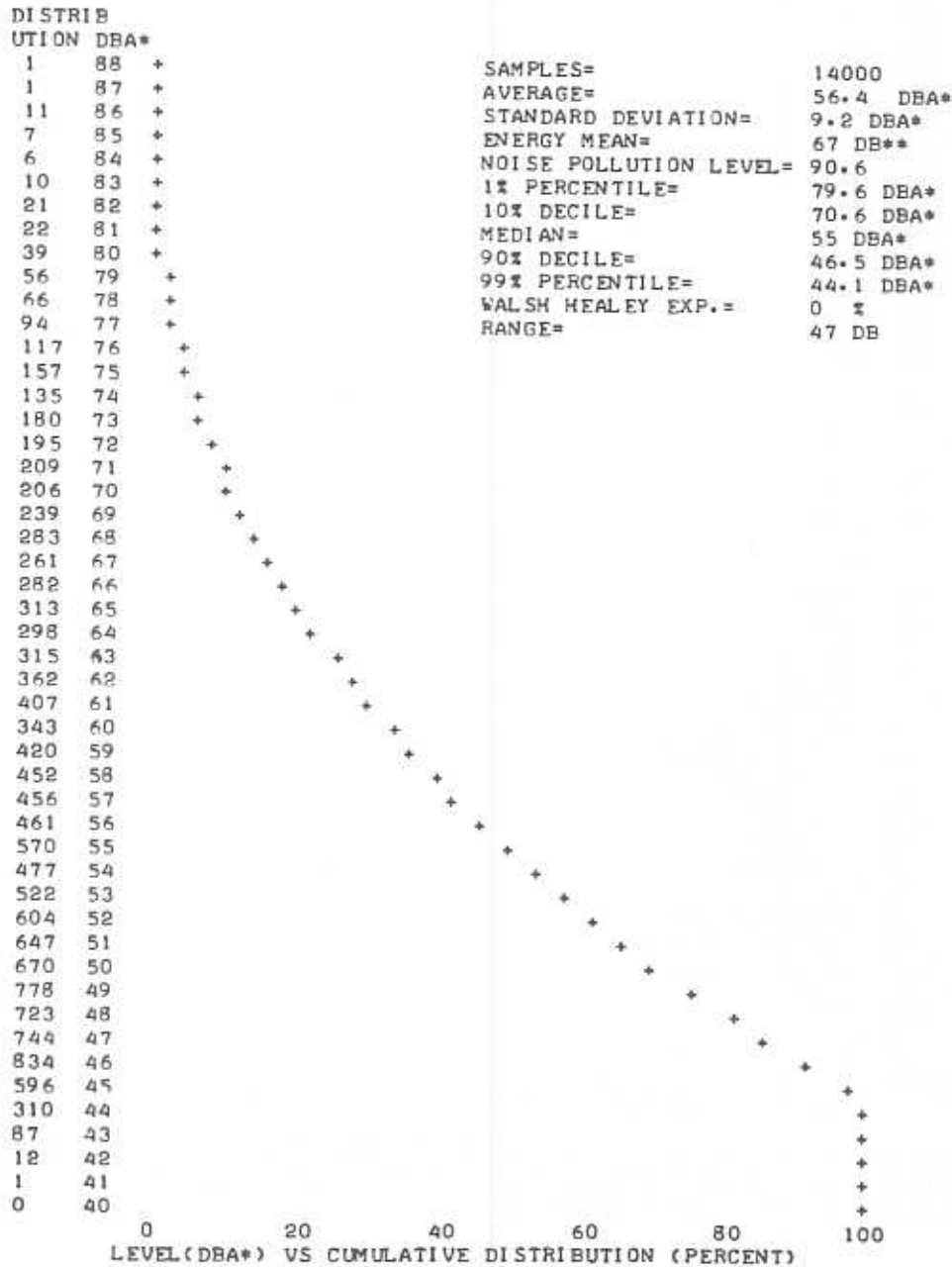


Figure B-24. Statistical Analysis of Noise Levels at Location 10 During the Mid-Day Run

1	88	0			
1	87	0			
11	86	0			
7	85	0			
6	84	0			
10	83	0			
21	82	0			
22	81	0			
39	80	00			
56	79	00			
66	78	00			
94	77	00			
117	76	00			
157	75	000			
135	74	000			
180	73	000			
195	72	000			
209	71	000			
206	70	000			
239	69	0000			
283	68	0000			
261	67	0000			
282	66	0000			
313	65	0000			
298	64	0000			
315	63	0000			
362	62	00000			
407	61	00000			
343	60	00000			
420	59	000000			
452	58	000000			
456	57	000000			
461	56	000000			
570	55	0000000			
477	54	000000			
522	53	0000000			
604	52	00000000			
647	51	00000000			
670	50	00000000			
778	49	000000000			
723	48	000000000			
744	47	000000000			
834	46	0000000000			
596	45	0000000			
310	44	0000			
87	43	00			
12	42	0			
1	41	0			
DIST. DBA*	0		10	20	30

LEVEL(DBA*) VS DISTRIBUTION (PERCENT)

*-A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 **-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF
 THE SQUARES OF THE SOUND PRESSURES.

Figure B-24 (Continued). Statistical Analysis of Noise Levels at Location 10
 During the Mid-Day Run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

THUR 05/18/72
 10:12

NOISE DATA FROM RUN NO. FL-62-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 9 1972 FROM 13:20 TO 13:48, IN WEST MIAMI - FLA. LOCATION #10
 (ZONE 17 UNIVERSAL GRID LOCATION 564.82 - 2852.84 .)
 (1/8 SECOND INTEGRATIONS, 8 PER SECOND)

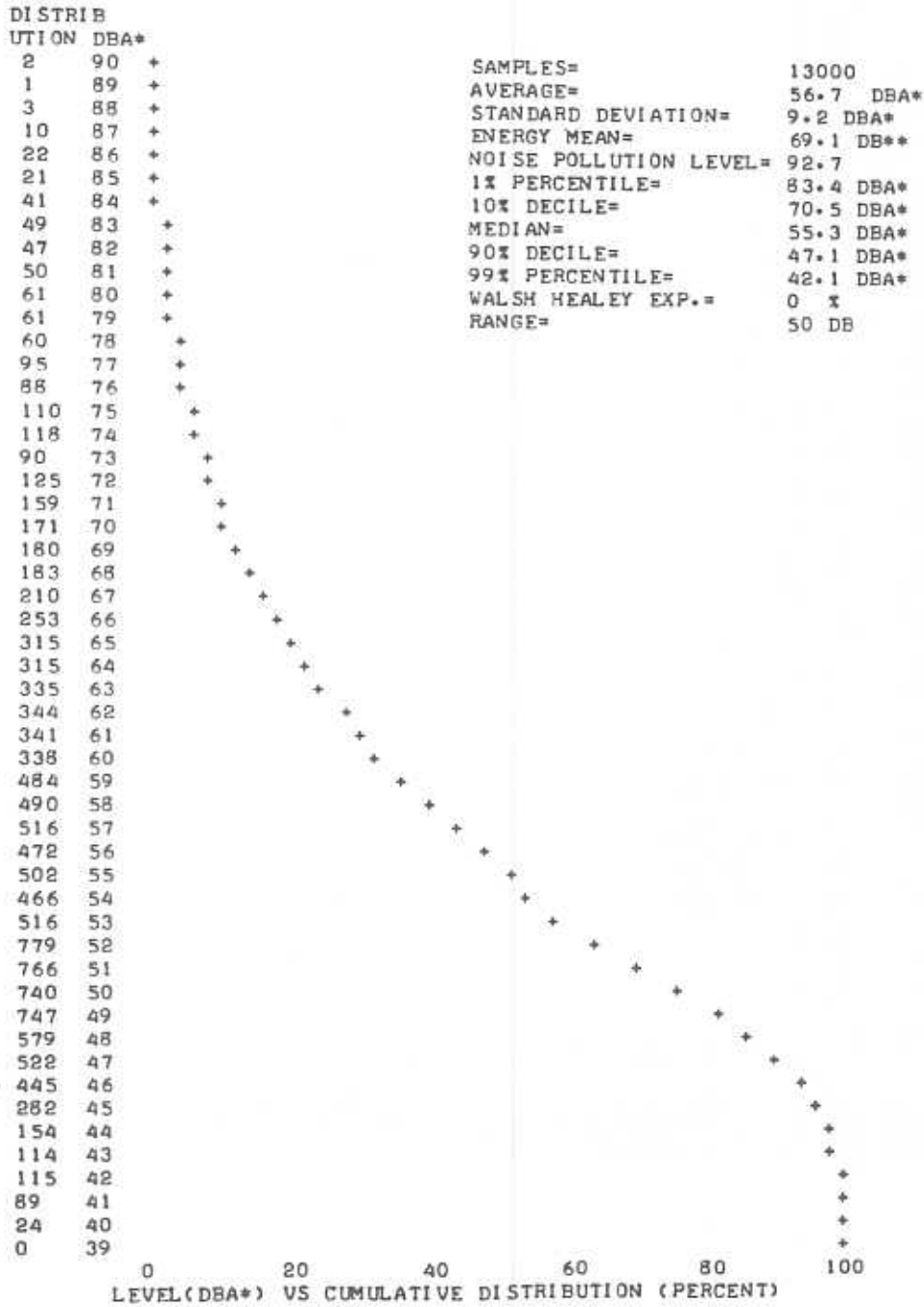


Figure B-25. Statistical Analysis of Noise Levels at Location 10 During the Mid-Day Run

2	90	0		
1	89	0		
3	88	0		
10	87	0		
22	86	0		
21	85	0		
41	84	00		
49	83	00		
47	82	00		
50	81	00		
61	80	00		
61	79	00		
60	78	00		
95	77	00		
88	76	00		
110	75	00		
118	74	00		
90	73	00		
125	72	000		
159	71	000		
171	70	000		
180	69	000		
183	68	000		
210	67	0000		
253	66	0000		
315	65	00000		
315	64	00000		
335	63	00000		
344	62	00000		
341	61	00000		
338	60	00000		
484	59	0000000		
490	58	0000000		
516	57	0000000		
472	56	0000000		
502	55	0000000		
466	54	0000000		
516	53	0000000		
779	52	000000000		
766	51	000000000		
740	50	000000000		
747	49	000000000		
579	48	00000000		
522	47	00000000		
445	46	0000000		
282	45	00000		
154	44	000		
114	43	00		
115	42	00		
89	41	00		
24	40	0		
DIST. DBA*	0	10	20	30
	LEVEL(DBA*) VS DISTRIBUTION (PERCENT)			

**A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 **-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF
 THE SQUARES OF THE SOUND PRESSURES.

Figure B-25 (Continued). Statistical Analysis of Noise Levels at Location 10
 During the Mid-Day Run

US DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION SYSTEMS CENTER
 NOISE ABATEMENT GROUP

MON 06/19/72
 08:37

NOISE DATA FROM RUN NO. FL-64-72-2A OF THE PORTABLE NOISE STATION ON
 MAY 10 1972 FROM 11:55 TO 12:45, IN WEST MIAMI - FLA. LOCATION #10
 (ZONE 17 UNIVERSAL GRID LOCATION 564.82 - 2852.84 .)
 (1/8 SECOND INTEGRATIONS 8 PER SECOND)

LISTRIB

U ON DBA*

	88	+
4	87	+
19	86	+
32	85	+
39	84	+
69	83	+
53	82	+
65	81	+
82	80	+
103	79	+
109	78	+
169	77	+
149	76	+
228	75	+
280	74	+
258	73	+
295	72	+
309	71	+
319	70	+
368	69	+
367	68	+
388	67	+
443	66	+
534	65	+
492	64	+
547	63	+
639	62	+
693	61	+
659	60	+
749	59	+
738	58	+
656	57	+
686	56	+
706	55	+
718	54	+
801	53	+
937	52	+
970	51	+
1013	50	+
1380	49	+
1563	48	+
1676	47	+
1570	46	+
1006	45	+
608	44	+
351	43	+
128	42	+
28	41	+
3	40	+
0	39	+

SAMPLES=	24000
AVERAGE=	55.8 DBA*
STANDARD DEVIATION=	9.5 DBA*
ENERGY MEAN=	67.9 DB**
NOISE POLLUTION LEVEL=	92.2
1% PERCENTILE=	81.6 DBA*
10% DECILE=	70.6 DBA*
MEDIAN=	54 DBA*
90% DECILE=	46.2 DBA*
99% PERCENTILE=	43.2 DBA*
WALSH HEALEY EXP.=	0 %
RANGE=	48 DB

0 20 40 60 80 100
 LEVEL (DBA*) VS CUMULATIVE DISTRIBUTION (PERCENT)

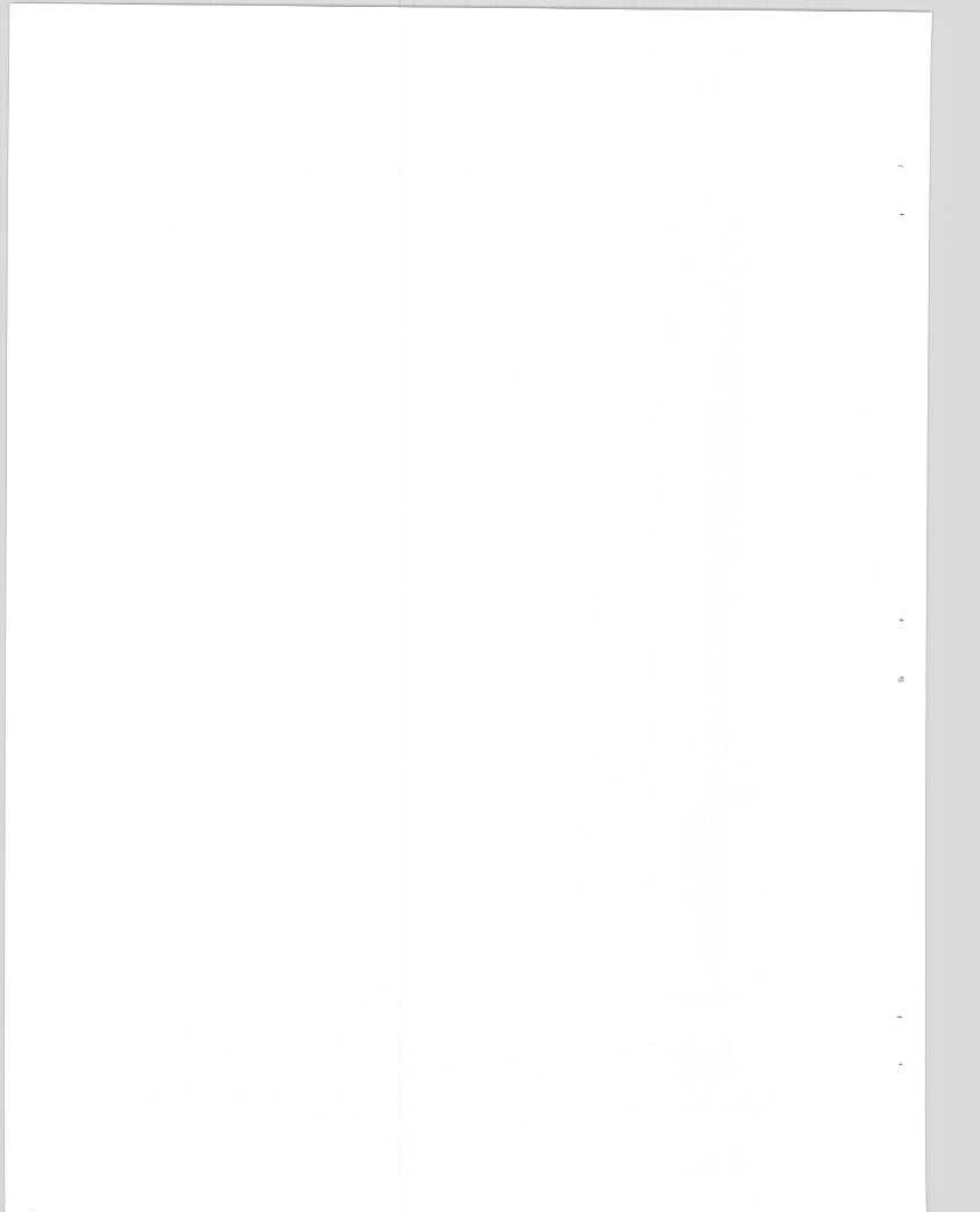
Figure B-26. Statistical Analysis of Noise Levels at Location 10 During the Mid-Day Run

DIST.	DBA*	0	10	20	30
1	88	0			
4	87	0			
19	84	0			
32	85	0			
39	84	0			
69	83	00			
53	82	0			
65	81	00			
82	80	00			
103	79	00			
109	78	00			
169	77	00			
149	76	00			
228	75	000			
280	74	000			
258	73	000			
295	72	000			
309	71	000			
319	70	000			
368	69	000			
367	68	000			
388	67	0000			
443	66	0000			
534	65	0000			
492	64	0000			
547	63	00000			
639	62	00000			
693	61	00000			
659	60	00000			
749	59	000000			
738	58	000000			
656	57	00000			
686	56	00000			
706	55	000000			
718	54	000000			
801	53	000000			
937	52	0000000			
970	51	0000000			
1013	50	0000000			
1380	49	0000000000			
1563	48	00000000000			
1676	47	000000000000			
1570	46	00000000000			
1006	45	0000000			
608	44	00000			
351	43	000			
128	42	00			
28	41	0			
3	40	0			
DIST.	DBA*	0	10	20	30

LFVEL(DBA*) VS DISTRIBUTION (PERCENT)

*-A WEIGHTED DECIBELS-RE. 20 MICRONEWTONS PER SQUARE METER
 **-DBA RE. 20 MICRONEWTONS PER SQUARE METER FROM AN AVERAGE OF
 THE SQUARES OF THE SOUND PRESSURES.

Figure B-26 (Continued). Statistical Analysis of Noise Levels at Location 10
 During the Mid-Day Run



APPENDIX C

PHOTOGRAPHS



Figure C-1. Opa-Locka Miami Lakes Site (Location No. 1)



Figure C-2. Opa-Locka Miami Lakes Site (Location No. 2)

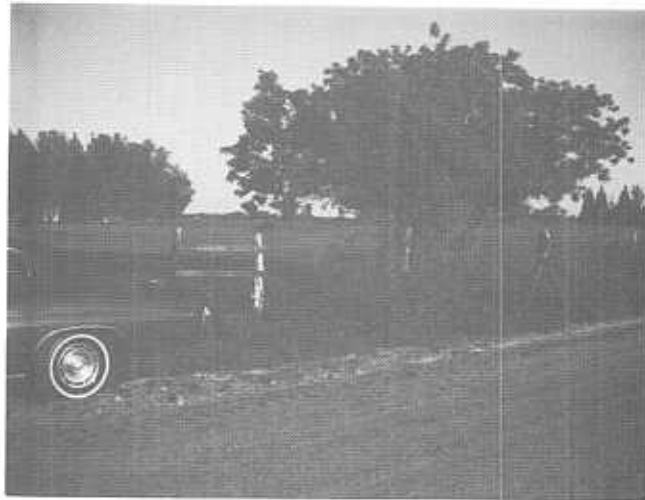


Figure C-3. Cooper City Sunshine Ranches Site (Location 3)



Figure C-4. Dirt Road Site Near Intersection of State Road 84 and Route 823 (Location 4)

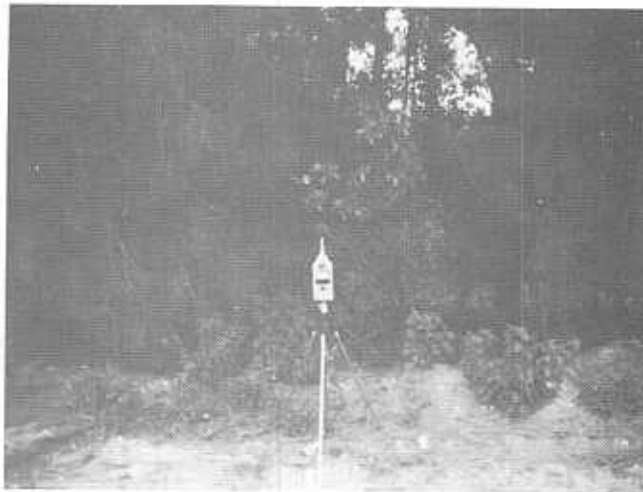


Figure C-5. Site 1.1 Miles West of State Road 84 and Route 823 Intersection (Location 5)



Figure C-6. North Miami Site (Location 6)



Figure C-7. North Miami Site (Location 7)



Figure C-8. West Miami Site (Location 8)



Figure C-9. Miami Site near Intersection of NW 76th Avenue, NW 4th Street, and Northwest Blvd.



Figure C-10. NW 97th Avenue Site (Location 10)

APPENDIX D

MEASUREMENT, CALIBRATION, AND DATA REDUCTION SYSTEMS

MEASUREMENT SYSTEM

The measurement system consisted entirely of portable equipment and was the same for each of the 27 runs. A photograph of the data gathering and measurement system is shown in Figure D-1. A block diagram of the system is shown in Figure D-2.

The system was capable of making tape recordings with the essentially flat response from 30 Hz to 15 kHz. The tape recorder was operated at a speed of 7 1/2 inches per second in the direct mode to yield the desired results.

A calibration signal was recorded on the tape before and after each run to insure system stability. The calibration signal was an electrically generated acoustic signal of 1 kHz. At a level of 94 decibels re 20 micronewtons per square meter.

The microphone was replaced by a dummy microphone simulator, and the system noise floor was recorded before and after each run to insure system sensitivity.



Figure D-1. Data Gathering and Measuring System

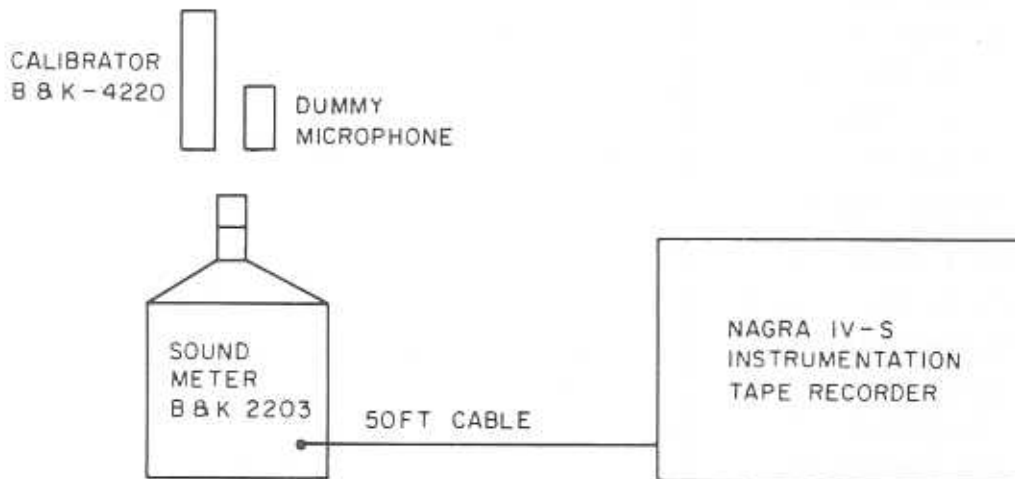


Figure D-2. Data Gathering Instrumentation

A sedan type vehicle was used for transporting and setting up the equipment. The recorder was set up in the rear seat of the sedan. A fifty foot cable was extended out through the sedan window to the sound level meter which was mounted on a tripod with the microphone installed directly on it.

During each run special events such as aircraft flyovers, lawn mowers etc. were time noted for future analysis.

Shortly after the beginning of each run weather data were collected and noted. Temperature and humidity were obtained from a sling psychrometer, barometric pressure from an aneroid barometer and wind speed from a small air velocity meter. A magnetic compass was used to determine wind direction.

Data Reduction

The data reduction system configuration is shown in Figure D-3. The noise data plus the calibration signal recorded on magnetic tape at the test site were reproduced and fed to a General Radio (GR) 1921 Real Time Analyzing System made up of GR 1925 Multifilter and a GR 1926 Multichannel RMS Detector. The necessary gain adjustments were made in the Multifilter and Graphic Level Recorder with the calibration signals.

The GR 1921 Multifilter contains a set of 30 parallel 1/3 octave band filter channels ranging from 25 Hz to 20 kHz, plus additional channels with standard "A", "B" and "C" sound-level meter weighting networks and an unfiltered channel with a flat frequency response. The output of the "A" weighted channel was selected and fed to the Graphic Level Recorder to produce a chart of Sound Level vs. time (Time History) contained in Appendix A of all recorded data. All 34 outputs from the Multifilter are fed into the Multichannel Detector. The Multichannel Detector simultaneously computes the RMS level (root mean square) for each channel and converts this level to a digital output. Single integration or measurement periods were adjusted from 1/8 to 32 seconds. A statistical analysis of the measured noise was obtained by programming the detector to integrate for 1/8th second, compute the dB value of the "A" weighted filter output, and provide a binary coded decimal signal to the Wang Computing Calculator eight times every second. This computer counted and totaled the number of samples at each sound level for a selected time period and produced a punched tape of the resulting data. These data were subsequently entered into a time-shared computer to produce statistical analysis printouts contained in Appendix B.

These statistical analyses contain a histogram presentation of dBA value versus frequency of occurrence and a cumulative distribution curve of dBA value vs. frequency of occurrences. Selected indices were also calculated and tabulated, e.g., average noise level dBA, standard deviation, energy mean, range of values measured, median, selected percentiles and deciles, the Noise Pollution Level and Walsh-Healy Exposure index. A complete description of these indices is contained in Appendix E.

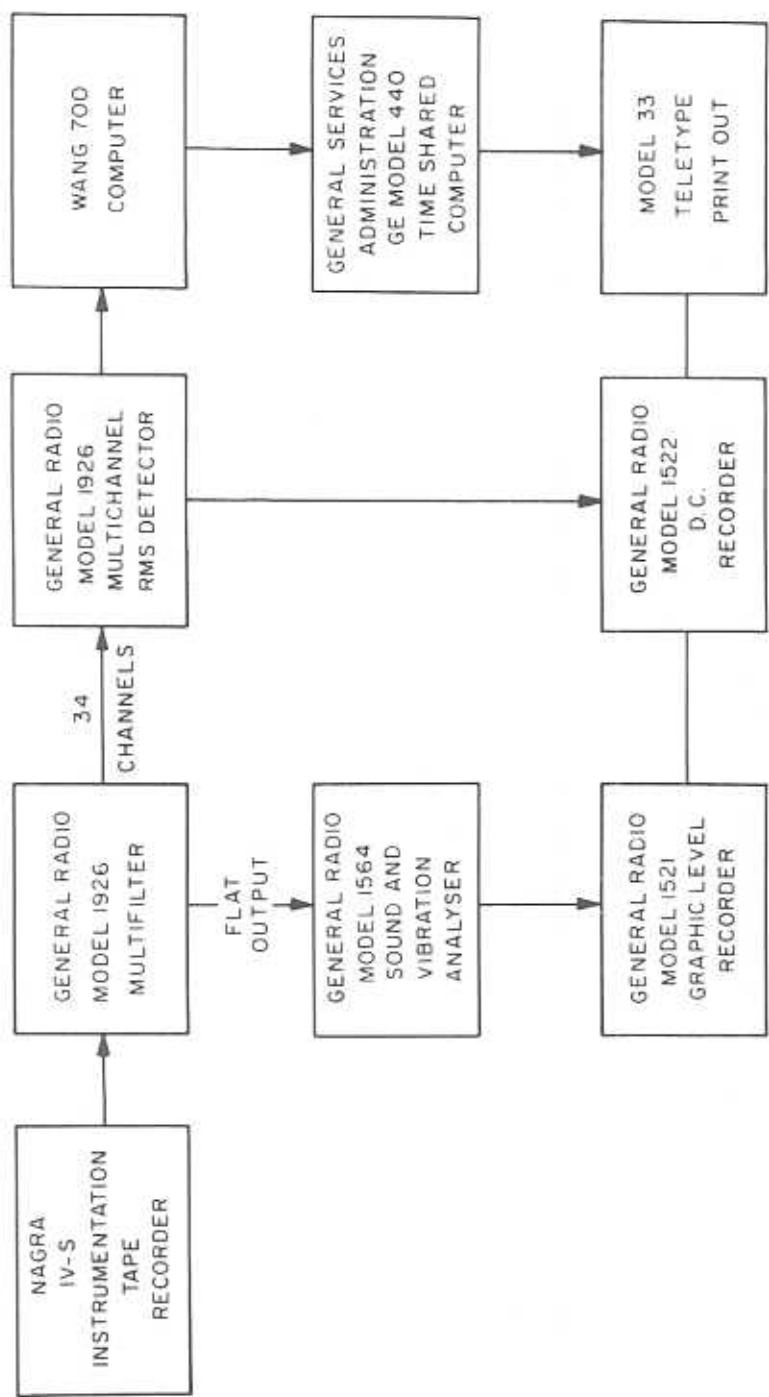
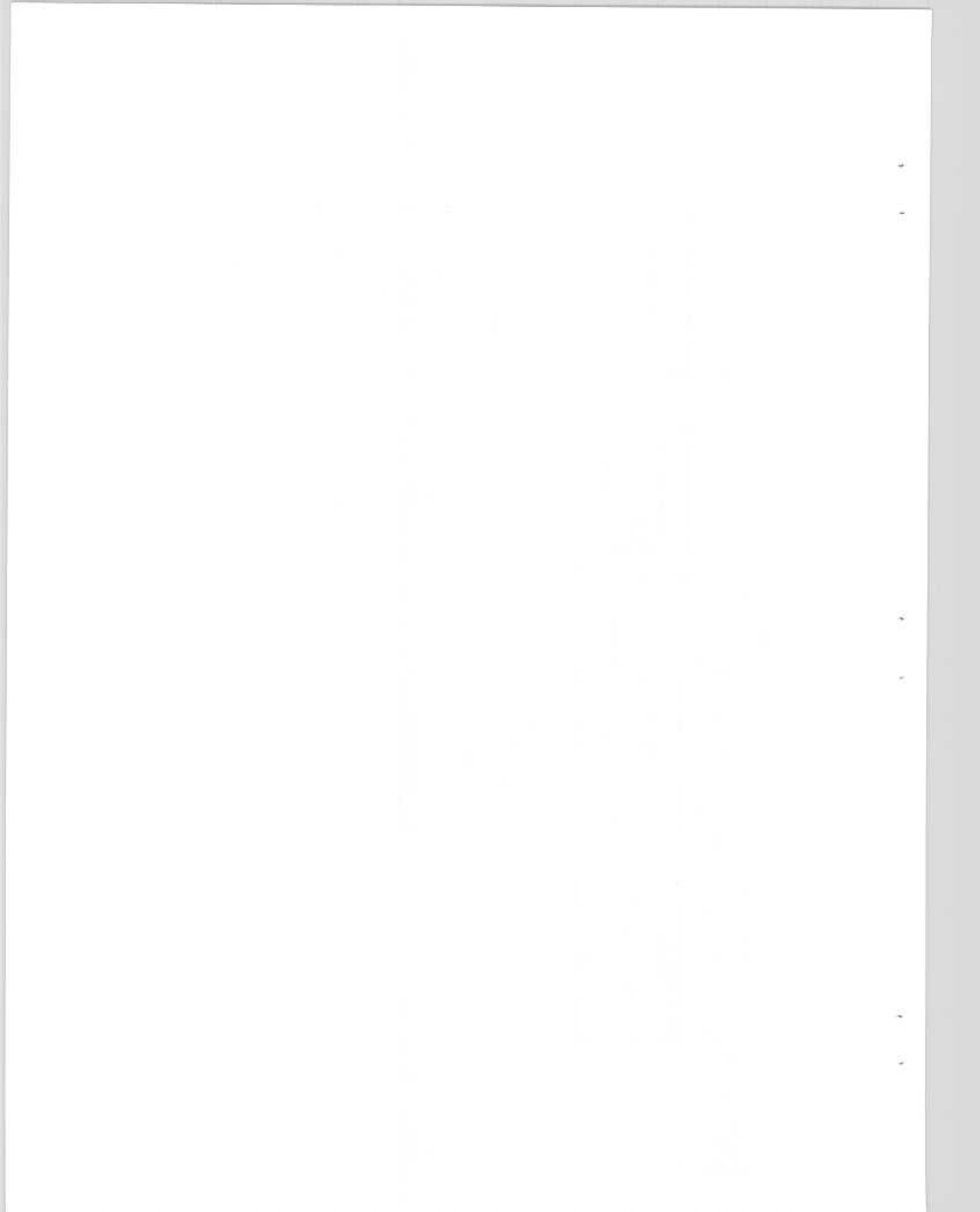


Figure D-3. Noise Data Reduction System



APPENDIX E

DEFINITION OF TERMS AND CALCULATED VALUES

DEFINITION OF TERMS

TERM	ABBREVIATION	DEFINITION
A-Weighted Sound Level	dBA	Sound level obtained by measuring the sound pressure through a filter network having a frequency response (A-weight) conforming to American National Standards Institute (ANSI, S1.4, 1961).
Median Noise Level	L 50	Sound level (dBA) exceeded by 50% of total measurements.
10% Decile	L 10	Sound level (dBA) exceeded by 10% of total measurements.
90% Decile	L 90	Sound level (dBA) exceeded by 90% of total measurements.
Noise Pollution Level	L NP	A composite index (see Calculation B6).
Walsh Healey Exposure		Measure of noise in terms of a Federal regulation (Walsh Healey Act) limiting the industrial noise to which a worker can be exposed.

CALCULATIONS

To describe the temporal characteristics of the noise data gathered, a statistical analysis of sound pressure level samples was performed. RMS sound pressure level samples were taken using an integration time of 1/8 second at a sample rate of eight samples per second to obtain the information contained in Appendix A. The frequency response characteristics of the samples conformed to ANSI Standard for Sound Level Meters, S1.4, 1961 for "A" weighted sound pressure level.

The following terms and equations were used to compute the statistical and single number indices appearing in this report:

A. Basic Terms

1. Total samples obtained: N
2. Total number of Sound Pressure Levels (from lowest level containing samples to highest level containing samples inclusive): M
3. Sound Pressure Level (lowest to highest) $SPL_1, SPL_2, \dots, SPL_M$
4. Samples at each Sound Pressure Level: C_1, C_2, \dots, C_M
5. Relationships

a.
$$\sum_{i=1}^M C_i = N$$

b.
$$SPL_M - SPL_1 + 1 = M$$

6. dBA (A Weight) - Sound level obtained by measuring the sound pressure through a filter network having a frequency response (A weight) conforming to American National Standards Institute (ANSI), S1.4, 1961. Reference sound pressure level - 20 micronewtons per square meter.

B. Statistical Equations

1. Cumulative Distribution, Percent (D_c)

$$D_c \ i = \frac{C_M + C_{M-1} + \dots + C_i}{N} \quad (100)$$

2. Statistical Distribution, Percent (D_s)

$$D_s \ i = \frac{C_i}{N} \quad (100) \quad i = 1, 2, \dots, M$$

3. Average (Arithmetic Mean, \overline{SPL})

$$\overline{SPL} = \sum_{i=1}^M \frac{C_i \text{ SPL}_i}{N}$$

4. Standard Deviation about average (s)

$$s = \sqrt{\frac{1}{N-1} \sum_{i=1}^N C_i (\text{SPL}_i - \overline{SPL})^2}$$

5. Energy Mean (L eq)

$$L \text{ eq} = 10 \log_{10} \left[\frac{\sum_{i=1}^M C_i 10^{\frac{\text{SPL}_i}{10}}}{N} \right]$$

6. Noise Pollution Level (L_{NP})

$$L_{NP} = L \text{ eq} + 2.56 s$$

7. Percentile Noise Levels, dBA

a. 1% Percentile (L_1) = Level exceeded by 1% of total samples

b. 10% Decile (L_{10}) = Level exceeded by 10% of total samples

c. Median (L_{50}) = Level exceeded by 50% of total samples

- d. 90% Decile (L_{90}) = Level exceeded by 90% of total samples
- e. 99% Percentile (L_{99}) = Level exceeded by 99% of total samples

These percentile levels are obtained from linear interpolation of the percentage cumulative distribution values.

- 8. Range: Highest sound level containing samples minus the lowest sound level containing samples.

$$\text{Range} = \text{SPL}_M - \text{SPL}_1$$

- 9. Walsh-Healey Act

- a. The Walsh-Healey Act is a Federal Regulation limiting the industrial noise that a worker can be exposed to during a work day. This law is applicable to any company doing in excess of \$10,000 worth of business with any agency of the U.S. Government.

The Walsh-Healey Exposure Percentage is a measure of the noise levels in terms of Walsh-Healey Exposures normalized to an 8 hour work day. When the percentage reaches or exceeds 100%, it means that exposure of a worker to that same noise climate for 8 hours would be in violation of the Walsh-Healey Act. Additionally, any one-time exposure over 115 dBA is a violation. In this report, if 115 dBA is exceeded during the measurement period, the exposure percentage number will be followed by a "V" indicating a violation even if the number is less than 100%.

- b. The equation used to calculate the Walsh-Healey exposure percentage is as follows:

$$W1 = \left[\frac{W2}{6} + \frac{W3}{4} + \frac{W4}{3} + \frac{W5}{2} + \frac{W6}{1.5} + \frac{W7}{1} + \frac{W8}{0.5} + \frac{W9}{0.25} \right]$$

$$\times \frac{800}{N}$$

where

- W1 = Walsh-Healey Exposure in percent.
- W2 = Number of samples in the 90 to 92 dBA band.
- W3 = Number of samples in the 92 to 95 dBA band.
- W4 = Number of samples in the 95 to 97 dBA band.
- W5 = Number of samples in the 97 to 100 dBA band.
- W6 = Number of samples in the 100 to 102 dBA band.
- W7 = Number of samples in the 102 to 105 dBA band.
- W8 = Number of samples in the 105 to 110 dBA band.
- W9 = Number of samples in the 110 to 115 dBA band
- N = Total number of samples

APPENDIX F
SITE LOCATIONS AND MAP

Note: Full view of Appendix F-1 (Map) available with original document.

APPENDIX F

SITE LOCATIONS AND MAP

TABLE F-1. LOCATION OF MEASUREMENT POINTS

Location Number	Zone 17 Coordinates		County
	kM East	kM North	
1	567.9	2865.7	Dade
2	569.2	2865.4	Dade
3	566.1	2881.2	Broward
4	567.2	2889.2	Broward
5	565.3	2889.8	Broward
6	584.11	2866.30	Dade
7	584.11	2871.78	Dade
8	563.36	2846.79	Dade
9	567.33	2850.70	Dade
10	564.82	2852.84	Dade