

[Noise report].

[s.l.]: [s.n.], [s.d.]

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2.8 NOISE

The range of sound pressure that can be heard by humans is very large, varying from sounds that are barely audible to sounds that are so loud as to be painful. The decibel (dB) notation system uses logarithms to compress this wide range of sound pressures to convenient quantities called sound pressure levels (Beranek, 1971).

$$\text{Sound pressure levels (dB)} = \log_{10} \frac{P}{P_0}$$

where:

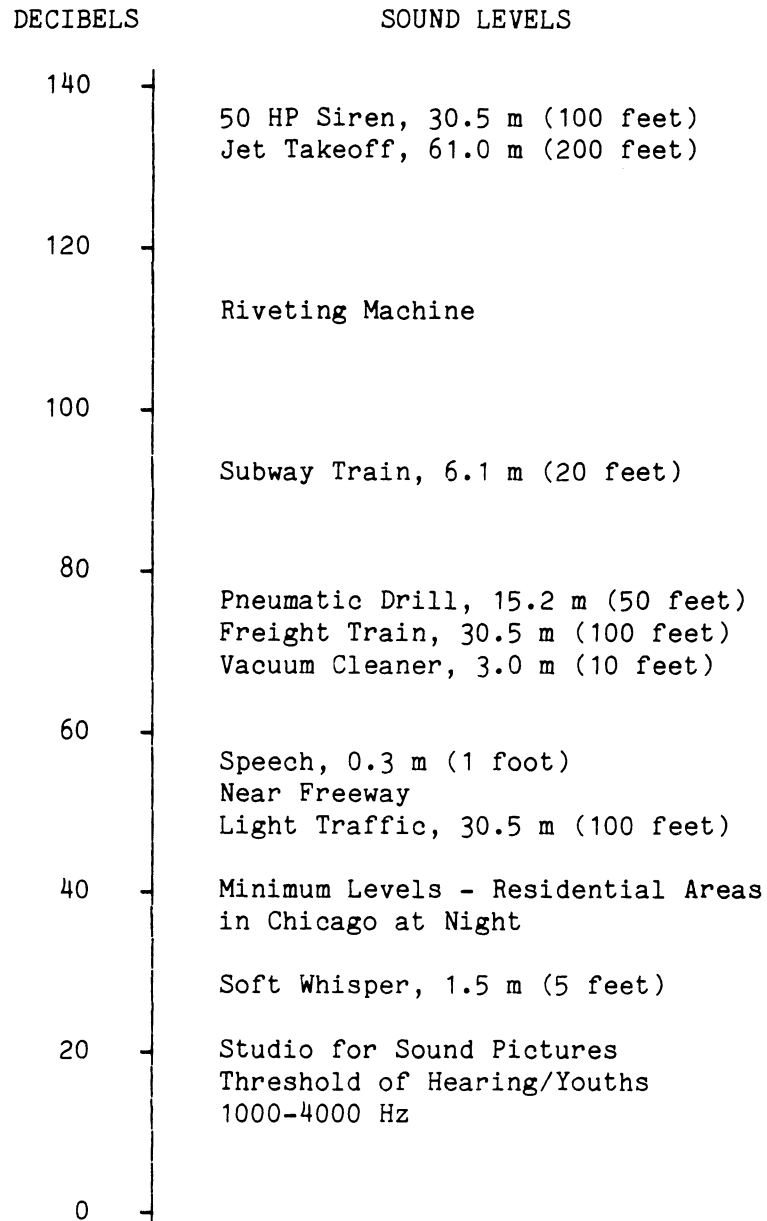
P_0 = sound pressure required for a threshold sensation of hearing; equal to 20 μPa (micropascals, while 1 micropascal = 10^{-6} newton per square meter) or 0.002 atmosphere; and

P = the measured sound pressure in micropascals or atmospheres.

On the decibel scale, 0 dB is assigned to P_0 . Approximately 125 dB is the sound level at the threshold of pain (U.S. Department of Labor, 1980).

The human ear does not perceive sounds at low frequencies in the same manner as those at higher frequencies. Sounds of equal intensity at low frequency do not seem as loud as those at higher frequencies. To simulate the human ear in evaluations of hearing damage risk or community annoyance impacts (Peterson and Gross, 1967), sound analysis systems incorporate an A-weighting network (American National Standards Institute, 1971a). A-weighted sound levels are expressed in decibels (dB) and are used in federal, state, and local noise (unwanted sound) ordinances. Typical A-weighted sound levels at a given distance from a sound source and in the environment are shown in the following chart (adapted from Peterson and Gross, 1967).

TYPICAL A-WEIGHTED SOUND LEVELS



Because sound is not constant with time, statistical analysis is used to describe the temporal distribution of a sound and to compute single-number descriptors for that sound. The following statistical, A-weighted sound levels (National Academy of Science, 1977; Bureau of National Affairs, 1978) are used in this report.

- L₉₀ - The sound level exceeded 90 percent of the time during the measurement period, often called the residual sound level.
- L₅₀ - The sound level exceeded 50 percent of the time during the measurement period; the median sound level.
- L₁₀ - The sound level exceeded 10 percent of the time during the measurement period, often called the intrusive sound level.
- L_{eq} - The equivalent steady sound level that provides an equal amount of acoustic energy* as the time-varying sound.
- L_d - Day sound level, L_{eq} for the daytime period (0700-2200) only.
- L_n - Night sound level, L_{eq} for the nighttime period (2200-0700) only.
- L_{dn} - Day-night sound level, defined as (U.S. EPA, 1974):

$$L_{dn} = 10 \log_{10} \frac{(15 \times 10^{(L_d/10)}) + (9 \times 10^{(L_n+10)/10})}{24}$$

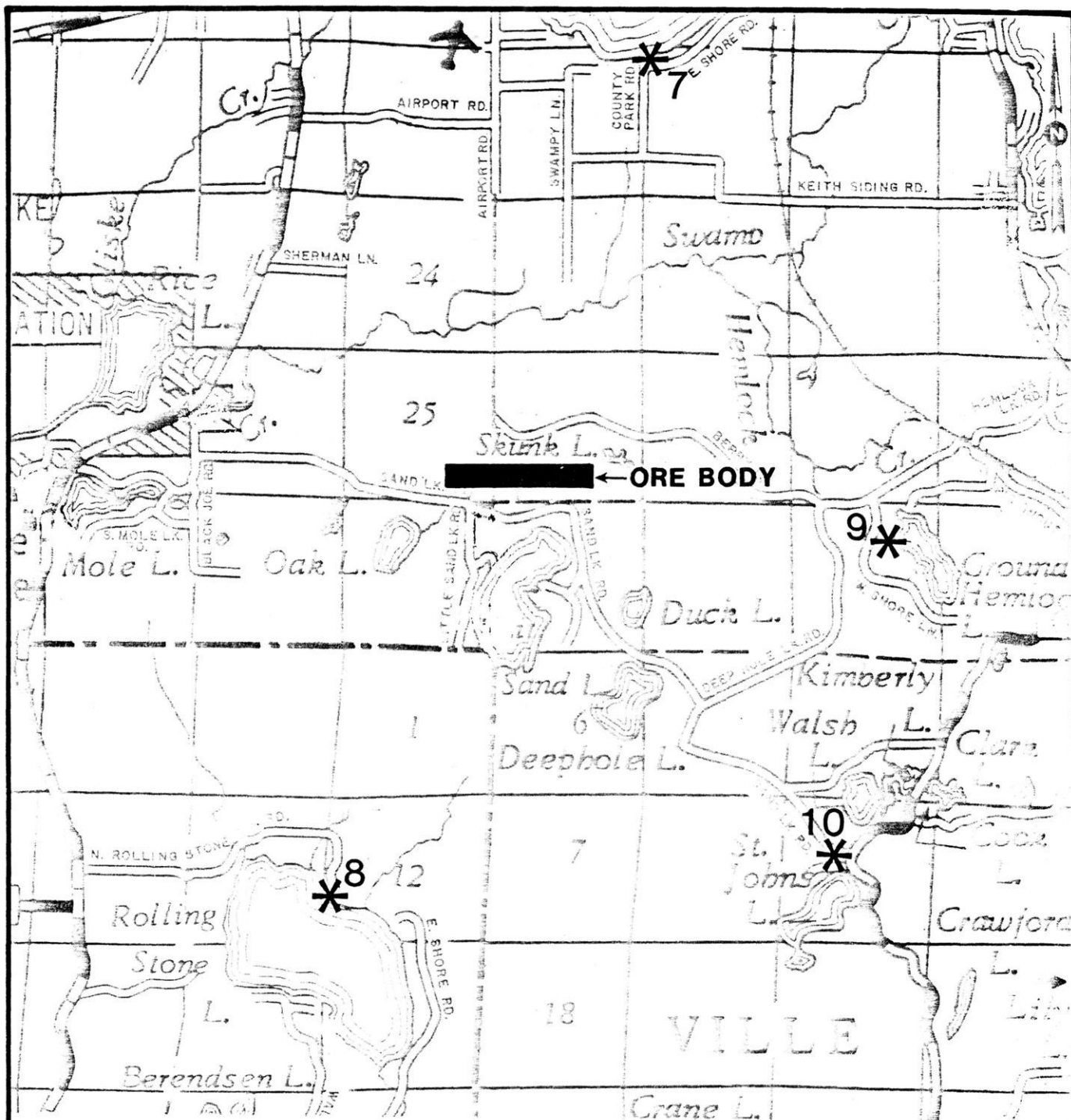
Note: The EPA adds a 10 dB correction factor to the night sound level as a weighting to compensate for the greater annoyance of nighttime noise (U.S. EPA, 1974).

2.8.1 Field and Laboratory Methods

Background ambient sound level data were obtained during the winter and summer and at three representative times of the day. During the periods March 29-31 and July 11-13, 1983, background ambient sound level data were collected at the four locations shown on Figure 2.8-1. The four locations were:

- Location 7 - South shore of Lake Metonga in parking lot of Forest County Veterans Memorial Park;

*Acoustic energy can be defined as follows: "Acoustic" means of or relating to sound; therefore, the sound energy of the given part of a medium is the total energy in this part of the medium minus the energy which would exist in the same part of the medium with no sound waves present (American National Standards Institute, 1971b).



KEY:



MEASUREMENT LOCATION

0 1 2
MILES

0 1 2
KILOMETERS

EXXON MINERALS COMPANY
CRANDON PROJECT

1983 NOISE SURVEY LOCATIONS

BASE MAP REFERENCE: WISCONSIN DEPARTMENT OF TRANSPORTATION,
1978.

DAMES & MOORE

FIGURE 28-1

Location 8 - North shore of Rolling Stone Lake on the Simonson property;

Location 9 - Northwest shore of Ground Hemlock Lake on the Solper property; and

Location 10 - North of St. John's Lake on Sand Lake Road.

The above locations were monitored to represent the sound climate at selected noise-sensitive land use areas within the environmental study area. These locations are in addition to the six locations monitored for the baseline studies in 1977. Such land uses included homes and recreational areas that may be negatively affected by noise. Sleep interference, loss of tranquility, and hearing damage are examples of negative effects. No measurements were made in "wilderness" or undeveloped areas, since background noise levels in these areas would be similar to those near isolated residences.

2.8.1.1 Measurement Program

Ambient sound measurements were made during both winter and summer conditions (foliage attenuates sound propagation during summer months, and local activities tend to differ from winter to summer). Measurements were made with a magnetic tape recorder data acquisition system consisting of a GenRad one-inch electret condenser microphone with windscreen, a GenRad Type 1933 Sound Level Meter, and a Nagra 4.2L single trace magnetic tape recorder. In each location, the microphone was located 1.2 to 1.5 m (4 to 5 feet) above the ground and at least 3.7 m (12 feet) from any large reflecting plane. During the data recording period, meteorological parameters that could affect that ambient sound were recorded on a data sheet, including wet bulb and dry

bulb temperatures (determined by a Bacharach hygrometer), barometric pressure, wind speed and direction (determined by a Sims BX anemometer). Humidity exceeding 95 percent reduces microphone output, and high wind (>19.3 km/hour [>12 miles/hour]) generates self-noise in the microphone. Had these conditions been noted during a survey, the survey would have been postponed (see Appendix 2.8A, Table A-48).

Also identified on the data sheet were all contributing sound sources, such as wind gusts and human and animal activity. Sound level meter readings were collected with a GenRad Type 1933 sound level meter, which records from 10 to 130 dB, for later confirmation of the recorded data.

Instrument calibration to a prerecorded tone of known acoustic pressure was undertaken in the field prior to each measurement. Background sound levels were recorded for continuous periods of 16 to 21 minutes, a time period considered sufficient to describe the character of the ambient sound (Safeer et al., 1972).

Sound level recordings for both winter and summer survey measurements were made during daytime (0700-1800), evening (1800-2200), and nighttime (2200-0700) periods. These periods are in accordance with the daytime (daytime and evening) and nighttime periods used by the U.S. EPA in its definition of day-night sound levels (U.S. EPA, 1974).

2.8.1.2 Analytical Procedures

The data recorded on magnetic tape were returned to the acoustic laboratory at Dames & Moore for statistical analysis by a computer-controlled data analysis system consisting of a GenRad Real Time Analyzer and a Digital Equipment Corporation minicomputer.

Analog data from the tape recorder were sampled after prefiltering by the A-weighting network; the sampled data were converted to digital binary form, and the binary numbers were used in the minicomputer to compute mean square level. Each sample was used to construct an A-weighted sound level histogram, indicating the number of times a particular sound occurred during the measurement period, and a cumulative distribution of the A-weighted sound levels, indicating the percentage of time a sound level was exceeded during the measurement period.

2.8.1.3 Quality Control

Quality control procedures were used by field and laboratory personnel during the background ambient sound level study as a means of assuring that the study was completed according to currently accepted standards and methods.

Field Procedures - At each measurement location for each measurement period, a log of important information was maintained. The sound level meter setting, the weighting network, and the instrument response ("fast" or "slow") were noted. Noise sources observed by the operator were recorded, as were the times when overloads or intrusive noises occurred. As discussed in subsection 2.8.1.1, meteorological parameters that might affect sound quality were also noted, and measurements were made only when those parameters were within specified operating ranges for the instrumentation used.

The sound level recording system was calibrated before the acquisition of data using a GenRad 1562-A sound level calibrator. A 114-dB,

1000-Hz tone was recorded on magnetic tape at the start of each measurement period.

Data Analyses - The tape recorded data were analyzed using a Digital Equipment Corporation PDP 8/a digital computer controlling a GenRad real time analyzer, whose input was from a Nagra 4.2L tape recorder. The calibration tone recorded on magnetic tape in the field was used to calibrate the data analysis system. Once calibrated, the computer controls the analysis and prints the results without operator interface, thus maintaining a high quality of analysis.

2.8.2 Background Ambient Sound Levels

Background ambient sound level data collected at the four monitoring locations are presented in Table 2.8-1. This table contains the statistical A-weighted sound levels, L_{90} , L_{50} , L_{10} , and L_{eq} , for each measurement period and L_d , L_n , and L_{dn} for each of the measurement locations.

In Appendix 2.8A, Tables A-1 through A-47 contain (1) A-weighted sound level histograms, indicating the number of times a particular sound level occurred during the measurement period, and (2) the cumulative distributions of the A-weighted sound levels, indicating the percentage of time a sound level was exceeded. Also included are the L_{99} , L_{90} , L_{50} , L_{10} , L_1 , and L_{eq} of the sound pressure levels at octave band center frequencies. In five instances, the L_{eq} values reported in Table 2.8-1 exceed the summary components presented (L_{90} , L_{50} , L_{10}); these cases are the result of infrequently recorded high intensity sounds that are reported in the corresponding

TABLE 2.8-1
SUMMARY OF AMBIENT SOUND LEVELS, dB

LOCATION	WINTER						SUMMER					
	DAYTIME (DATE-TIME)		EVENING (DATE-TIME)		NIGHTTIME (DATE-TIME)		DAYTIME (DATE-TIME)		EVENING (DATE-TIME)		NIGHTTIME (DATE-TIME)	
7 - Lake Metonga	<u>3/30/83</u> 1225 1300		<u>3/29/83</u> 2100		<u>3/30-31/83</u> 2340 0010		<u>7/12/83</u> 1500 1530		<u>7/11/83</u> 1910 1937		<u>7/11-12/83</u> 2350 0020	
L ₉₀	41	41	43		41	41	41	41	41	39	39	38
L ₅₀	42	41	44		42	42	44	44	44	42	41	39
L ₁₀	43	42	45		42	42	48	51	50	47	46	39
L _{eq}	46.9	41.4	44.3		41.9	41.7	46.4	48.8	47.7	44.5	42.9	38.9
	[45.0]		[44.3]		[41.8]		[47.8]		[46.4]		[41.3]	
L _d			44.8						47.5			
L _n			41.8						41.3			
L _{dn}			48.8						49.3			
8 - Rolling Stone Lake	<u>3/30/83</u> 1345 1413		<u>3/30/83</u> 2045 2115		<u>3/31/83</u> 0100 0125		<u>7/12/83</u> 1530 1555		<u>7/11/83</u> 2036 2110		<u>7/11/83</u> 2230 2300	
L ₉₀	31	32	31	30	30	30	38	35	34	33	36	34
L ₅₀	33	33	32	31	31	31	42	40	37	34	39	38
L ₁₀	36	38	34	31	31	31	44	43	43	40	43	42
L _{eq}	33.7	35.5	32.1	30.7	30.8	30.8	42.1	40.6	39.3	36.2	40.2	38.9
	[34.7]		[31.4]		[30.8]		[41.4]		[38.0]		[39.6]	
L _d			34.2						40.7			
L _n			30.8						39.6			
L _{dn}			37.9						46.2			
9 - Ground Hemlock Lake	<u>3/30/83</u> 1008 1027		<u>3/30/83</u> 1910 1940		<u>3/29/83</u> 2245 2310		<u>7/13/83</u> 1205 1230		<u>7/12/83</u> 1825 1847		<u>7/12/83</u> 2200 2230	
L ₉₀	30	31	30	30	30	29	37	37	31	28	26	25
L ₅₀	31	33	30	30	30	29	42	39	33	32	26	26
L ₁₀	34	35	31	31	31	30	47	42	39	35	28	29
L _{eq}	32.1	33.4	30.5	36.8	30.3	29.6	44.2	39.6	46.0	32.5	26.8	28.0
	[32.8]		[34.7]		[30.0]		[42.5]		[43.2]		[27.4]	
L _d			33.4						42.7			
L _n			30.0						27.4			
L _{dn}			37.1						41.4			
10 - St. John's Lake	<u>3/30/83</u> 1118 1143		<u>3/30/83</u> 1800 1827		<u>3/30/83</u> 2225 2250		<u>7/13/83</u> 1655 1725		<u>7/12/83</u> 2025 2055		<u>7/12/83</u> 2315 2345	
L ₉₀	31	33	30	30	31	31	34	33	26	26	25	24
L ₅₀	33	34	31	31	31	31	38	37	28	29	25	25
L ₁₀	35	36	32	32	31	31	42	43	36	40	27	26
L _{eq}	33.4	34.5	30.9	31.6	31.0	31.0	38.9	39.6	32.6	37.3	28.0	28.1
	[34.0]		[31.3]		[31.0]		[39.3]		[35.6]		[28.1]	
L _d			33.4						38.6			
L _n			31.0						28.1			
L _{dn}			37.8						38.4			

- Notes: 1. L₉₀, L₅₀, and L₁₀ are measured quantities rounded to the nearest whole number. L_{eq}, L_d, L_n, and L_{dn} are calculations rounded to the nearest tenth.
2. The times shown for the daytime, evening, and nighttime periods signify the start time of recorded 16- to 21-minute data samples.
3. Numbers in brackets [] are average L_{eq} values for each time period.

appendix tables. Appendix 2.8A, Table A-48, presents a summary of the meteorological conditions during the measurement periods. The wind speed, humidity, and temperature data indicate that the range of meteorological conditions was within appropriate limits for optimal performance of the instrumentation (GenRad, 1976).

Sound levels at Location 7 during the winter survey were the result of water flowing over a small dam and wind moving tree leaves. During the summer survey, sound levels were mainly from human activities associated with the picnic area and campground.

Sound levels at Location 8 during the winter survey were from wind blowing through nearby trees, bird sounds, and an occasional gunshot and dog barking. During the summer survey, wind moving tree leaves, birds, insects, and occasional aircraft were the major noise sources.

At Location 9, the sound levels were caused by wind moving tree leaves, bird sounds, and occasional cars driven by during the winter survey. During the summer survey, wind moving tree leaves, bird and insect sounds, cars, and distant aircraft were the major contributing noise sources.

Sound levels at Location 10 during the winter survey were mainly caused by wind blowing through nearby trees, bird sounds, distant chainsaws, and cars. Summer survey sound levels were from bird sounds, distant voices, cars, moving leaves, and occasional aircraft.

The day sound levels, L_d , and day-night sound levels, L_{dn} , obtained at the four locations were as follows:

A-WEIGHTED DAYTIME AND DAY-NIGHT EQUIVALENT SOUND LEVELS (dB)

Location	L _d		L _{dn}	
	Winter	Summer	Winter	Summer
7 - Lake Metonga	44.8	47.5	48.8	49.3
8 - Rolling Stone Lake	34.2	40.7	37.9	46.2
9 - Ground Hemlock Lake	33.4	42.7	37.1	41.4
10 - St. John's Lake	33.4	38.6	37.8	38.4

At all locations, summer sound levels were higher than those in winter as a result of increased human activity during measurement periods.

The U.S. EPA has identified a day-night sound level (L_{dn}) of 55 dB as requisite for the protection of public health and welfare (U.S. EPA, 1974). Since the sound levels in most communities across the United States generally exceed this level at present (Galloway et al., 1973), the agency has identified an L_{dn} of 65 dB as its short-term goal and an L_{dn} of 55 dB as its long-term goal (U.S. EPA, 1977). Day-night sound levels at all locations sampled in summer and winter were below these short- and long-term goals. All daytime and nighttime sound levels sampled were representative of a rural or quiet suburban neighborhood (National Academy of Science, 1977).

2.8.3 Summary and Conclusions

1. Background ambient sound level measurements were made at four locations representing noise-sensitive land uses within 6 km (4 miles) of the mine/mill site, during both winter and summer conditions (without and with foliage, respectively), and at three representative time periods of the day.

2. The background ambient sound levels were indicative of a rural or quiet suburban neighborhood, as defined by the National Academy of Science (1977).
3. Day-night sound levels at all four locations were below the U.S. EPA short- and long-term goals for the protection of public health and welfare.

2.8.4 References

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APPENDIX 2.8A

AMBIENT SOUND LEVEL DATA
TABLES A-1 THROUGH A-48

AMBIENT SOUND LEVEL DATA

[illegible]

A-Weighted
Sound Level,
dB re: 20 μ Pa

EQUIVALENT SOUND LEVEL = 44.2 DB

CUMULATIVE DISTRIBUTION

[illegible]

Location: 7
Date: March 29, 1983
Time: 2100

AMBIENT SOUND LEVEL DATA

[illegible]

A-Weighted Sound Level
- dB re: 20 μ Pa

120	100	0.0%	
130	100	0.0%	
140	100	0.0%	
150	100	0.0%	
160	100	0.0%	
170	100	0.0%	
180	100	0.0%	
190	100	0.0%	
200	100	0.0%	
210	100	0.0%	
220	100	0.0%	
230	100	0.0%	
240	100	0.0%	
250	100	0.0%	
260	100	0.0%	
270	100	0.0%	
280	100	0.0%	
290	100	0.0%	
300	100	0.0%	
310	100	0.0%	
320	100	0.0%	
330	100	0.0%	
340	100	0.0%	
350	100	0.0%	
360	100	0.0%	
370	100	0.0%	
380	100	0.0%	
390	100	0.0%	
400	100	0.0%	
410	100	0.0%	
420	100	0.0%	
430	100	0.0%	
440	100	0.0%	
450	100	0.0%	
460	100	0.0%	
470	100	0.0%	
480	100	0.0%	
490	100	0.0%	
500	100	0.0%	
510	100	0.0%	
520	100	0.0%	
530	100	0.0%	
540	100	0.0%	
550	100	0.0%	
560	100	0.0%	
570	100	0.0%	
580	100	0.0%	
590	100	0.0%	
600	100	0.0%	
610	100	0.0%	
620	100	0.0%	
630	100	0.0%	
640	100	0.0%	
650	100	0.0%	
660	100	0.0%	
670	100	0.0%	
680	100	0.0%	
690	100	0.0%	
700	100	0.0%	
710	100	0.0%	
720	100	0.0%	
730	100	0.0%	
740	100	0.0%	
750	100	0.0%	
760	100	0.0%	
770	100	0.0%	
780	100	0.0%	
790	100	0.0%	
800	100	0.0%	
810	100	0.0%	
820	100	0.0%	
830	100	0.0%	
840	100	0.0%	
850	100	0.0%	
860	100	0.0%	
870	100	0.0%	
880	100	0.0%	
890	100	0.0%	
900	100	0.0%	
910	100	0.0%	
920	100	0.0%	
930	100	0.0%	
940	100	0.0%	
950	100	0.0%	
960	100	0.0%	
970	100	0.0%	
980	100	0.0%	
990	100	0.0%	
1000	100	0.0%	
1010	100	0.0%	
1020	100	0.0%	
1030	100	0.0%	
1040	100	0.0%	
1050	100	0.0%	
1060	100	0.0%	
1070	100	0.0%	
1080	100	0.0%	
1090	100	0.0%	
1100	100	0.0%	
1110	100	0.0%	
1120	100	0.0%	
1130	100	0.0%	
1140	100	0.0%	
1150	100	0.0%	
1160	100		

EQUIVALENT SOUND LEVEL = 70.3 DB

CUMULATIVE DISTRIBUTION

[illegible]

Location: 9
Date: March 29, 1983
Time: 2245

TABLE A-4

AMBIENT SOUND LEVEL DATA

FILE: B00005.DR

OCTAVE BAND Hz	LEQ dB	L 1	L 2	L 3	L 4	L 5
31.5	44.0	44.0	44.0	44.0	44.0	44.0
35.5	44.0	44.0	44.0	44.0	44.0	44.0
40.0	44.0	44.0	44.0	44.0	44.0	44.0
45.0	44.0	44.0	44.0	44.0	44.0	44.0
50.0	44.0	44.0	44.0	44.0	44.0	44.0
56.2	44.0	44.0	44.0	44.0	44.0	44.0
63.0	44.0	44.0	44.0	44.0	44.0	44.0
70.0	44.0	44.0	44.0	44.0	44.0	44.0
79.0	44.0	44.0	44.0	44.0	44.0	44.0
89.0	44.0	44.0	44.0	44.0	44.0	44.0
100.0	44.0	44.0	44.0	44.0	44.0	44.0
112.0	44.0	44.0	44.0	44.0	44.0	44.0
125.0	44.0	44.0	44.0	44.0	44.0	44.0
140.0	44.0	44.0	44.0	44.0	44.0	44.0
157.0	44.0	44.0	44.0	44.0	44.0	44.0
175.0	44.0	44.0	44.0	44.0	44.0	44.0
195.0	44.0	44.0	44.0	44.0	44.0	44.0
216.0	44.0	44.0	44.0	44.0	44.0	44.0
239.0	44.0	44.0	44.0	44.0	44.0	44.0
263.0	44.0	44.0	44.0	44.0	44.0	44.0
289.0	44.0	44.0	44.0	44.0	44.0	44.0
316.0	44.0	44.0	44.0	44.0	44.0	44.0
355.0	44.0	44.0	44.0	44.0	44.0	44.0
400.0	44.0	44.0	44.0	44.0	44.0	44.0
450.0	44.0	44.0	44.0	44.0	44.0	44.0
500.0	44.0	44.0	44.0	44.0	44.0	44.0
562.0	44.0	44.0	44.0	44.0	44.0	44.0
630.0	44.0	44.0	44.0	44.0	44.0	44.0
700.0	44.0	44.0	44.0	44.0	44.0	44.0
790.0	44.0	44.0	44.0	44.0	44.0	44.0
890.0	44.0	44.0	44.0	44.0	44.0	44.0
1000.0	44.0	44.0	44.0	44.0	44.0	44.0
1120.0	44.0	44.0	44.0	44.0	44.0	44.0
1250.0	44.0	44.0	44.0	44.0	44.0	44.0
1400.0	44.0	44.0	44.0	44.0	44.0	44.0
1570.0	44.0	44.0	44.0	44.0	44.0	44.0
1750.0	44.0	44.0	44.0	44.0	44.0	44.0
1950.0	44.0	44.0	44.0	44.0	44.0	44.0
2160.0	44.0	44.0	44.0	44.0	44.0	44.0
2390.0	44.0	44.0	44.0	44.0	44.0	44.0
2630.0	44.0	44.0	44.0	44.0	44.0	44.0
2890.0	44.0	44.0	44.0	44.0	44.0	44.0
3160.0	44.0	44.0	44.0	44.0	44.0	44.0
3550.0	44.0	44.0	44.0	44.0	44.0	44.0
4000.0	44.0	44.0	44.0	44.0	44.0	44.0
4500.0	44.0	44.0	44.0	44.0	44.0	44.0
5000.0	44.0	44.0	44.0	44.0	44.0	44.0
5620.0	44.0	44.0	44.0	44.0	44.0	44.0
6300.0	44.0	44.0	44.0	44.0	44.0	44.0
7000.0	44.0	44.0	44.0	44.0	44.0	44.0
7900.0	44.0	44.0	44.0	44.0	44.0	44.0
8900.0	44.0	44.0	44.0	44.0	44.0	44.0
10000.0	44.0	44.0	44.0	44.0	44.0	44.0

A-Weighted Sound Level -

dB re: 20µPa

31.5	29.2	2
35.5	10.1	2
40.0	17.9	2
45.0	13.0	2
50.0	4.0	2
56.2	9.1	2
63.0	9.4	2
70.0	9.1	2
79.0	9.1	2

EQUIVALENT SOUND LEVEL = 22.1 DB

CUMULATIVE DISTRIBUTION

(%) EXCEEDED	SOUND PRESSURE LEVEL-DB
100	44.0
90	44.0
80	44.0
70	44.0
60	44.0
50	44.0
40	44.0
30	44.0
20	44.0
10	44.0
5	44.0
2	44.0
1	44.0

Background Ambient Sound Level Data

Location: 9
Date: March 30, 1983
Time: 1000

FILE SCRAP ON

[illegible]

A - Weighted
Sound Level -
dB re: 20 μ Pa

[illegible]

EQUIVALENT SOUND LEVEL = 11.4 DB

[illegible]

AMBIENT SOUND LEVEL DATA

FILE NO. 5-15

[illegible]

A-Weighted Sound Level - dB re: 20 μ Pa

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1 0.1 N
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5 10.2 N
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7 1.7 N
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9 1.6 N
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EQUIVALENT SOUND LEVEL = 46.9 DB

Background Ambient Sound Level Data

Location: 7
Date: March 30, 1983
Time: 1225

TABLE A-9
AMBIENT SOUND LEVEL DATA

FILE 00011.DR

OCTAVE BAND	100	125	160	200	250	315	400
Hz	100	125	160	200	250	315	400
100	40.0	40.0	40.0	40.0	40.0	40.0	40.0
125	40.0	40.0	40.0	40.0	40.0	40.0	40.0
160	40.0	40.0	40.0	40.0	40.0	40.0	40.0
200	40.0	40.0	40.0	40.0	40.0	40.0	40.0
250	40.0	40.0	40.0	40.0	40.0	40.0	40.0
315	40.0	40.0	40.0	40.0	40.0	40.0	40.0
400	40.0	40.0	40.0	40.0	40.0	40.0	40.0

A-Weighted Sound Level
 - dB re: 20 μ Pa

100	40.0	40.0	40.0	40.0	40.0	40.0	40.0
125	40.0	40.0	40.0	40.0	40.0	40.0	40.0
160	40.0	40.0	40.0	40.0	40.0	40.0	40.0
200	40.0	40.0	40.0	40.0	40.0	40.0	40.0
250	40.0	40.0	40.0	40.0	40.0	40.0	40.0
315	40.0	40.0	40.0	40.0	40.0	40.0	40.0
400	40.0	40.0	40.0	40.0	40.0	40.0	40.0

EQUIVALENT SOUND LEVEL = 41.4 DB

CUMULATIVE DISTRIBUTION

NO. EXCEEDED	SOUND PRESSURE LEVEL-DB
1	40
2	41
3	41
4	41
5	41
6	41
7	41
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11	41
12	41
13	41
14	41
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42	41
43	41
44	41
45	41
46	41
47	41
48	41
49	41
50	41

Background Ambient Sound Level Data

Location: 7
 Date: March 30, 1983
 Time: 1300

AMBIENT SOUND LEVEL DATA

[illegible][illegible]

CUMULATIVE DISTRIBUTION

[illegible]

Location: 8
Date: March 30, 1983
Time: 1345

AMBIENT SOUND LEVEL DATA

OCTUBER 1990		NOVEMBER 1990		DECEMBER 1990		JANUARY 1991		FEBRUARY 1991		MARCH 1991		APRIL 1991		MAY 1991		JUNE 1991		JULY 1991		AUGUST 1991		SEPTEMBER 1991		OCTOBER 1991		NOVEMBER 1991		DECEMBER 1991		JANUARY 1992		FEBRUARY 1992		MARCH 1992		APRIL 1992		MAY 1992		JUNE 1992		JULY 1992		AUGUST 1992		SEPTEMBER 1992		OCTOBER 1992		NOVEMBER 1992		DECEMBER 1992		JANUARY 1993		FEBRUARY 1993		MARCH 1993		APRIL 1993		MAY 1993		JUNE 1993		JULY 1993		AUGUST 1993		SEPTEMBER 1993		OCTOBER 1993		NOVEMBER 1993		DECEMBER 1993		JANUARY 1994		FEBRUARY 1994		MARCH 1994		APRIL 1994		MAY 1994		JUNE 1994		JULY 1994		AUGUST 1994		SEPTEMBER 1994		OCTOBER 1994		NOVEMBER 1994		DECEMBER 1994		JANUARY 1995		FEBRUARY 1995		MARCH 1995		APRIL 1995		MAY 1995		JUNE 1995		JULY 1995		AUGUST 1995		SEPTEMBER 1995		OCTOBER 1995		NOVEMBER 1995		DECEMBER 1995		JANUARY 1996		FEBRUARY 1996		MARCH 1996		APRIL 1996		MAY 1996		JUNE 1996		JULY 1996		AUGUST 1996		SEPTEMBER 1996		OCTOBER 1996		NOVEMBER 1996		DECEMBER 1996		JANUARY 1997		FEBRUARY 1997		MARCH 1997		APRIL 1997		MAY 1997		JUNE 1997		JULY 1997		AUGUST 1997		SEPTEMBER 1997		OCTOBER 1997		NOVEMBER 1997		DECEMBER 1997		JANUARY 1998		FEBRUARY 1998		MARCH 1998		APRIL 1998		MAY 1998		JUNE 1998		JULY 1998		AUGUST 1998		SEPTEMBER 1998		OCTOBER 1998		NOVEMBER 1998		DECEMBER 1998		JANUARY 1999		FEBRUARY 1999		MARCH 1999		APRIL 1999		MAY 1999		JUNE 1999		JULY 1999		AUGUST 1999		SEPTEMBER 1999		OCTOBER 1999		NOVEMBER 1999		DECEMBER 1999		JANUARY 2000		FEBRUARY 2000		MARCH 2000		APRIL 2000		MAY 2000		JUNE 2000		JULY 2000		AUGUST 2000		SEPTEMBER 2000		OCTOBER 2000		NOVEMBER 2000		DECEMBER 2000		JANUARY 2001		FEBRUARY 2001		MARCH 2001		APRIL 2001		MAY 2001		JUNE 2001		JULY 2001		AUGUST 2001		SEPTEMBER 2001		OCTOBER 2001		NOVEMBER 2001		DECEMBER 2001		JANUARY 2002		FEBRUARY 2002		MARCH 2002		APRIL 2002		MAY 2002		JUNE 2002		JULY 2002		AUGUST 2002		SEPTEMBER 2002		OCTOBER 2002		NOVEMBER 2002		DECEMBER 2002		JANUARY 2003		FEBRUARY 2003		MARCH 2003		APRIL 2003		MAY 2003		JUNE 2003		JULY 2003		AUGUST 2003		SEPTEMBER 2003		OCTOBER 2003		NOVEMBER 2003		DECEMBER 2003		JANUARY 2004		FEBRUARY 2004		MARCH 2004		APRIL 2004		MAY 2004		JUNE 2004		JULY 2004		AUGUST 2004		SEPTEMBER 2004		OCTOBER 2004		NOVEMBER 2004		DECEMBER 2004		JANUARY 2005		FEBRUARY 2005		MARCH 2005		APRIL 2005		MAY 2005		JUNE 2005		JULY 2005		AUGUST 2005		SEPTEMBER 2005		OCTOBER 2005		NOVEMBER 2005		DECEMBER 2005		JANUARY 2006		FEBRUARY 2006		MARCH 2006		APRIL 2006		MAY 2006		JUNE 2006		JULY 2006		AUGUST 2006		SEPTEMBER 2006		OCTOBER 2006		NOVEMBER 2006		DECEMBER 2006		JANUARY 2007		FEBRUARY 2007		MARCH 2007		APRIL 2007		MAY 2007		JUNE 2007		JULY 2007		AUGUST 2007		SEPTEMBER 2007		OCTOBER 2007		NOVEMBER 2007		DECEMBER 2007		JANUARY 2008		FEBRUARY 2008		MARCH 2008		APRIL 2008		MAY 2008		JUNE 2008		JULY 2008		AUGUST 2008		SEPTEMBER 2008		OCTOBER 2008		NOVEMBER 2008		DECEMBER 2008		JANUARY 2009		FEBRUARY 2009		MARCH 2009		APRIL 2009		MAY 2009		JUNE 2009		JULY 2009		AUGUST 2009		SEPTEMBER 2009		OCTOBER 2009		NOVEMBER 2009		DECEMBER 2009		JANUARY 2010		FEBRUARY 2010		MARCH 2010		APRIL 2010		MAY 2010		JUNE 2010		JULY 2010		AUGUST 2010		SEPTEMBER 2010	
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dB re: 20 μ Pa

13	0.4 %	
12		24.7 %
11		
10		
9		19.8 %
8	4.4 %	
7	2.2 %	
6	1.2 %	
5	2.4 %	
4	2 %	
3	2.1 %	
2	1.5 %	
1	1.1 %	
0	0.5 %	
0	0.5 %	
0	0.5 %	
0	0.3 %	
0	0.2 %	
0	0.1 %	

CUMULATIVE DISTRIBUTION

[illegible]

Location: 8
Date: March 30, 1983
Time: 1413

TABLE A-14

AMBIENT SOUND LEVEL DATA

FILE BCR16.DR

OCTAVE BAND Hz	LEG dB	L 1	L 10	L 50	L 90	L 99
12.5	12.7	11.8	11.4	11.1	10.9	10.7
15.6	20.9	11.8	11.8	12.8	12.6	12.3
19.8	21.8	12.6	12.3	12.1	11.9	11.8
25.1	21.7	12.6	12.4	12.8	12.8	12.7
31.5	21.5	12.5	12.3	12.8	12.9	12.9
39.8	21.1	12.4	12.2	12.1	12.1	12.0
50.0	20.3	12.4	12.3	12.3	12.3	12.3
63.0	24.4	12.5	12.5	12.4	12.4	12.4
79.6	22.1	12.3	12.3	12.2	12.2	12.2
100.0	19.9	11.8	11.1	11.8	11.8	11.6

A-Weighted
Sound Level
dB re 20 µPa

11.8 11.4 11.1 10.9 10.7
11.8 11.8 12.8 12.6 12.3
12.6 12.3 12.1 11.9 11.8
12.6 12.4 12.8 12.9 12.9
12.5 12.3 12.1 12.1 12.0
12.4 12.3 12.3 12.3 12.3
12.5 12.5 12.4 12.4 12.4
12.3 12.3 12.2 12.2 12.2
11.8 11.1 11.8 11.8 11.6

50.2 Z
37.8 Z

EQUIVALENT SOUND LEVEL = 30.5 DB

CUMULATIVE DISTRIBUTION,

(%) EXCEEDED	SOUND PRESSURE LEVEL-DB
100	11.8
90	11.8
80	11.8
70	11.8
60	11.8
50	11.8
40	11.8
30	11.8
20	11.8
10	11.8
5	11.8
2	11.8
1	11.8

Location: 9
Date: March 30, 1983
Time: 1940

$$0 \rightarrow H^1(\Gamma, \mathbb{Z}) \rightarrow H^1(\Gamma, \mathbb{R}) \rightarrow H^1(\Gamma, \mathbb{C}) \rightarrow 0$$
[illegible]

A - Weighted
Sound Level
- dB re 20 μ Pa

2000
2001
2002
2003
2004
2005

[illegible]
$$\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} = \frac{1}{32}$$

• 5 •

1. 2. 3.

22 2 2

NOISE/HEAT SOURCE LEVEL = 15.7 DB

COMBINATION DISTRIBUTION

INDEX

SOUND PRESSURE LEVEL-DB

[illegible]

Background Ambient Sound Level Data

Location: 8
Date: March 30, 1983
Time: 2115

THE UNIVERSITY OF CHICAGO

[illegible]

A - Weighted :
Sound Level
dB re: 20 μ Pa

[illegible]

EQUIVALENT SOUND LEVEL = 74 DB

CUMULATIVE DISTRIBUTION

[illegible]

Background Ambient Sound Level Data

Location: 10
Date: March 30, 1983
Time: 2250

TABLE A-20

AMBIENT SOUND LEVEL DATA

FILE HCR22.DR

OCTAVE BAND	1/3	1/2	2/3	1	3/2	2	3	4
Hz	125	160	200	250	315	400	500	630
1	41	41	41	41	41	41	41	41
2	41	41	41	41	41	41	41	41
3	41	41	41	41	41	41	41	41
4	41	41	41	41	41	41	41	41
5	41	41	41	41	41	41	41	41
6	41	41	41	41	41	41	41	41
7	41	41	41	41	41	41	41	41
8	41	41	41	41	41	41	41	41
9	41	41	41	41	41	41	41	41
10	41	41	41	41	41	41	41	41
11	41	41	41	41	41	41	41	41
12	41	41	41	41	41	41	41	41
13	41	41	41	41	41	41	41	41
14	41	41	41	41	41	41	41	41
15	41	41	41	41	41	41	41	41
16	41	41	41	41	41	41	41	41
17	41	41	41	41	41	41	41	41
18	41	41	41	41	41	41	41	41
19	41	41	41	41	41	41	41	41
20	41	41	41	41	41	41	41	41
21	41	41	41	41	41	41	41	41
22	41	41	41	41	41	41	41	41
23	41	41	41	41	41	41	41	41
24	41	41	41	41	41	41	41	41
25	41	41	41	41	41	41	41	41
26	41	41	41	41	41	41	41	41
27	41	41	41	41	41	41	41	41
28	41	41	41	41	41	41	41	41
29	41	41	41	41	41	41	41	41
30	41	41	41	41	41	41	41	41
31	41	41	41	41	41	41	41	41
32	41	41	41	41	41	41	41	41
33	41	41	41	41	41	41	41	41
34	41	41	41	41	41	41	41	41
35	41	41	41	41	41	41	41	41
36	41	41	41	41	41	41	41	41
37	41	41	41	41	41	41	41	41
38	41	41	41	41	41	41	41	41
39	41	41	41	41	41	41	41	41
40	41	41	41	41	41	41	41	41
41	41	41	41	41	41	41	41	41
42	41	41	41	41	41	41	41	41
43	41	41	41	41	41	41	41	41
44	41	41	41	41	41	41	41	41
45	41	41	41	41	41	41	41	41
46	41	41	41	41	41	41	41	41
47	41	41	41	41	41	41	41	41
48	41	41	41	41	41	41	41	41
49	41	41	41	41	41	41	41	41
50	41	41	41	41	41	41	41	41
51	41	41	41	41	41	41	41	41
52	41	41	41	41	41	41	41	41
53	41	41	41	41	41	41	41	41
54	41	41	41	41	41	41	41	41
55	41	41	41	41	41	41	41	41
56	41	41	41	41	41	41	41	41
57	41	41	41	41	41	41	41	41
58	41	41	41	41	41	41	41	41
59	41	41	41	41	41	41	41	41
60	41	41	41	41	41	41	41	41
61	41	41	41	41	41	41	41	41
62	41	41	41	41	41	41	41	41
63	41	41	41	41	41	41	41	41
64	41	41	41	41	41	41	41	41
65	41	41	41	41	41	41	41	41
66	41	41	41	41	41	41	41	41
67	41	41	41	41	41	41	41	41
68	41	41	41	41	41	41	41	41
69	41	41	41	41	41	41	41	41
70	41	41	41	41	41	41	41	41
71	41	41	41	41	41	41	41	41
72	41	41	41	41	41	41	41	41
73	41	41	41	41	41	41	41	41
74	41	41	41	41	41	41	41	41
75	41	41	41	41	41	41	41	41
76	41	41	41	41	41	41	41	41
77	41	41	41	41	41	41	41	41
78	41	41	41	41	41	41	41	41
79	41	41	41	41	41	41	41	41
80	41	41	41	41	41	41	41	41
81	41	41	41	41	41	41	41	41
82	41	41	41	41	41	41	41	41
83	41	41	41	41	41	41	41	41
84	41	41	41	41	41	41	41	41
85	41	41	41	41	41	41	41	41
86	41	41	41	41	41	41	41	41
87	41	41	41	41	41	41	41	41
88	41	41	41	41	41	41	41	41
89	41	41	41	41	41	41	41	41
90	41	41	41	41	41	41	41	41
91	41	41	41	41	41	41	41	41
92	41	41	41	41	41	41	41	41
93	41	41	41	41	41	41	41	41
94	41	41	41	41	41	41	41	41
95	41	41	41	41	41	41	41	41
96	41	41	41	41	41	41	41	41
97	41	41	41	41	41	41	41	41
98	41	41	41	41	41	41	41	41
99	41	41	41	41	41	41	41	41
100	41	41	41	41	41	41	41	41

EQUIVALENT SOUND LEVEL = 41.9 DB

CUMULATIVE DISTRIBUTION

(%) EXCEEDED	SOUND PRESSURE LEVEL-DB
100	41
95	41
90	41
85	41
80	41
75	41
70	41
65	41
60	41
55	41
50	41
45	41
40	41
35	41
30	41
25	41
20	41
15	41
10	41
5	41
0	41

Background Ambient Sound Level Data

Location: 7
Date: March 30, 1983
Time: 2340

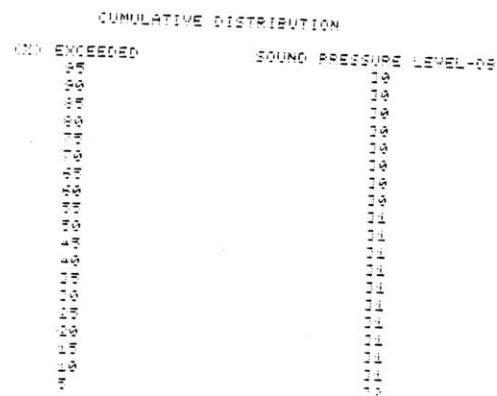
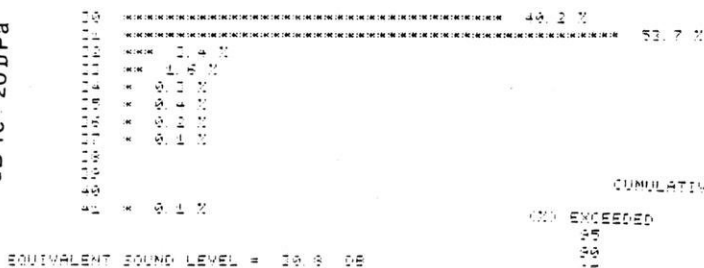
TABLE A-22

AMBIENT SOUND LEVEL DATA

FILE 80024.DA

OCTAVE BAND	1/3	1/2	1	2	3	5
HZ	125	250	500	1000	2000	4000
125	11	11	11	14	25	27
160	11	11	11	14	25	27
200	11	11	11	14	25	27
250	11	11	11	14	25	27
315	11	11	11	14	25	27
400	11	11	11	14	25	27
500	11	11	11	14	25	27
630	11	11	11	14	25	27
800	11	11	11	14	25	27
1000	11	11	11	14	25	27
1250	11	11	11	14	25	27
1600	11	11	11	14	25	27
2000	11	11	11	14	25	27
2500	11	11	11	14	25	27
3150	11	11	11	14	25	27
4000	11	11	11	14	25	27
5000	11	11	11	14	25	27
6300	11	11	11	14	25	27
8000	11	11	11	14	25	27
10000	11	11	11	14	25	27

A-Weighted
Sound Level
dB re: 20µPa



Background Ambient Sound Level Data

Location: 8
Date: March 31, 1983
Time: 0100

[illegible]

Location: 7
Date: July 11, 1983
Time: 1910

75 5002.04

DATE	DESCRIPTION	AMOUNT	CHECK NO.	BANK	INTEREST	TOTAL
10/1/54	10/1/54	100.00	100	100	100	100
10/2/54	10/2/54	100.00	101	101	101	101
10/3/54	10/3/54	100.00	102	102	102	102
10/4/54	10/4/54	100.00	103	103	103	103
10/5/54	10/5/54	100.00	104	104	104	104
10/6/54	10/6/54	100.00	105	105	105	105
10/7/54	10/7/54	100.00	106	106	106	106
10/8/54	10/8/54	100.00	107	107	107	107
10/9/54	10/9/54	100.00	108	108	108	108
10/10/54	10/10/54	100.00	109	109	109	109
10/11/54	10/11/54	100.00	110	110	110	110
10/12/54	10/12/54	100.00	111	111	111	111
10/13/54	10/13/54	100.00	112	112	112	112
10/14/54	10/14/54	100.00	113	113	113	113
10/15/54	10/15/54	100.00	114	114	114	114
10/16/54	10/16/54	100.00	115	115	115	115
10/17/54	10/17/54	100.00	116	116	116	116
10/18/54	10/18/54	100.00	117	117	117	117
10/19/54	10/19/54	100.00	118	118	118	118
10/20/54	10/20/54	100.00	119	119	119	119
10/21/54	10/21/54	100.00	120	120	120	120
10/22/54	10/22/54	100.00	121	121	121	121
10/23/54	10/23/54	100.00	122	122	122	122
10/24/54	10/24/54	100.00	123	123	123	123
10/25/54	10/25/54	100.00	124	124	124	124
10/26/54	10/26/54	100.00	125	125	125	125
10/27/54	10/27/54	100.00	126	126	126	126
10/28/54	10/28/54	100.00	127	127	127	127
10/29/54	10/29/54	100.00	128	128	128	128
10/30/54	10/30/54	100.00	129	129	129	129
10/31/54	10/31/54	100.00	130	130	130	130
11/1/54	11/1/54	100.00	131	131	131	131
11/2/54	11/2/54	100.00	132	132	132	132
11/3/54	11/3/54	100.00	133	133	133	133
11/4/54	11/4/54	100.00	134	134	134	134
11/5/54	11/5/54	100.00	135	135	135	135
11/6/54	11/6/54	100.00	136	136	136	136
11/7/54	11/7/54	100.00	137	137	137	137
11/8/54	11/8/54	100.00	138	138	138	138
11/9/54	11/9/54	100.00	139	139	139	139
11/10/54	11/10/54	100.00	140	140	140	140
11/11/54	11/11/54	100.00	141	141	141	141
11/12/54	11/12/54	100.00	142	142	142	142
11/13/54	11/13/54	100.00	143	143	143	143
11/14/54	11/14/54	100.00	144	144	144	144
11/15/54	11/15/54	100.00	145	145	145	145
11/16/54	11/16/54	100.00	146	146	146	146
11/17/54	11/17/54	100.00	147	147	147	147
11/18/54	11/18/54	100.00	148	148	148	1

A-Weighted Sound Level
dB re 20 μ Pa

[illegible]

EQUIVALENT SOUND LEVEL = 44.9 DB

CUMULATIVE DISTRIBUTION

[illegible]

TABLE A-26

AMBIENT SOUND LEVEL DATA

FILE 80021.DR

OCTAVE BAND Hz.	LEQ dB	L 1	L 1.5	L 2	L 2.5	L 3	L 3.5
31.5	43	44	44	44	44	44	44
35.5	43	44	44	44	44	44	44
40	43	44	44	44	44	44	44
45	43	44	44	44	44	44	44
50	43	44	44	44	44	44	44
56	43	44	44	44	44	44	44
63	43	44	44	44	44	44	44
71	43	44	44	44	44	44	44
80	43	44	44	44	44	44	44
90	43	44	44	44	44	44	44
100	43	44	44	44	44	44	44
112	43	44	44	44	44	44	44
125	43	44	44	44	44	44	44
140	43	44	44	44	44	44	44
160	43	44	44	44	44	44	44
180	43	44	44	44	44	44	44
200	43	44	44	44	44	44	44
224	43	44	44	44	44	44	44
250	43	44	44	44	44	44	44
280	43	44	44	44	44	44	44
315	43	44	44	44	44	44	44
355	43	44	44	44	44	44	44
400	43	44	44	44	44	44	44
450	43	44	44	44	44	44	44
500	43	44	44	44	44	44	44
560	43	44	44	44	44	44	44
630	43	44	44	44	44	44	44
710	43	44	44	44	44	44	44
800	43	44	44	44	44	44	44
900	43	44	44	44	44	44	44
1000	43	44	44	44	44	44	44
1120	43	44	44	44	44	44	44
1250	43	44	44	44	44	44	44
1400	43	44	44	44	44	44	44
1600	43	44	44	44	44	44	44
1800	43	44	44	44	44	44	44
2000	43	44	44	44	44	44	44
2240	43	44	44	44	44	44	44
2500	43	44	44	44	44	44	44
2800	43	44	44	44	44	44	44
3150	43	44	44	44	44	44	44
3550	43	44	44	44	44	44	44
4000	43	44	44	44	44	44	44
4500	43	44	44	44	44	44	44
5000	43	44	44	44	44	44	44
5600	43	44	44	44	44	44	44
6300	43	44	44	44	44	44	44
7100	43	44	44	44	44	44	44
8000	43	44	44	44	44	44	44
9000	43	44	44	44	44	44	44
10000	43	44	44	44	44	44	44

A-Weighted Sound Level dB re: 20 μ Pa	2.4 %	8.4 %	17.9 %	41.5 %	59.5 %	64.4 %	74.5 %	84.5 %	94.5 %
31.5									
35.5									
40									
45									
50									
56									
63									
71									
80									
90									
100									
112									
125									
140									
160									
180									
200									
224									
250									
280									
315									
355									
400									
450									
500									
560									
630									
710									
800									
900									
1000									
1120									
1250									
1400									
1600									
1800									
2000									
2240									
2500									
2800									
3150									
3550									
4000									
4500									
5000									
5600									
6300									
7100									
8000									
9000									
10000									

EQUIVALENT SOUND LEVEL = 39.3 DB

CUMULATIVE DISTRIBUTION

(%) EXCEEDED	SOUND PRESSURE LEVEL-DB
95	44
90	44
80	44
70	44
60	44
50	44
40	44
30	44
20	44
10	44
5	44
2	44
1	44
0	44

Background Ambient Sound Level Data

Location: 8
Date: July 11, 1983
Time: 2036

TABLE A-27

AMBIENT SOUND LEVEL DATA

FILE E0804.D8

OCTAVE BAND	LB	1	1.5	2	2.5	3
Hz	dB	dB	dB	dB	dB	dB
125	44	44	44	44	44	44
150	44	44	44	44	44	44
180	44	44	44	44	44	44
220	44	44	44	44	44	44
270	44	44	44	44	44	44
330	44	44	44	44	44	44
400	44	44	44	44	44	44
500	44	44	44	44	44	44
630	44	44	44	44	44	44
800	44	44	44	44	44	44
1000	44	44	44	44	44	44
1250	44	44	44	44	44	44
1600	44	44	44	44	44	44
2000	44	44	44	44	44	44
2500	44	44	44	44	44	44
3150	44	44	44	44	44	44
4000	44	44	44	44	44	44
5000	44	44	44	44	44	44
6300	44	44	44	44	44	44
8000	44	44	44	44	44	44
10000	44	44	44	44	44	44

A-Weighted Sound Level	dB re: 20uPa	dB
125	44	44
150	44	44
180	44	44
220	44	44
270	44	44
330	44	44
400	44	44
500	44	44
630	44	44
800	44	44
1000	44	44
1250	44	44
1600	44	44
2000	44	44
2500	44	44
3150	44	44
4000	44	44
5000	44	44
6300	44	44
8000	44	44
10000	44	44

EQUIVALENT SOUND LEVEL = 36.2 DB

CUMULATIVE DISTRIBUTION

(%) EXCEEDED	SOUND PRESSURE LEVEL-DB
99	44
95	44
90	44
85	44
80	44
75	44
70	44
65	44
60	44
55	44
50	44
45	44
40	44
35	44
30	44
25	44
20	44
15	44
10	44
5	44
0	44

Background Ambient Sound Level Data

Location: 8
Date: July 11, 1983
Time: 2110

TABLE A-29

AMBIENT SOUND LEVEL DATA

FILE B0015.DA

OCTAVE BAND HZ.	LEG DB	L 1	L 10	L 50	L 90	L 95
12.5	41.4	41.4	41.4	41.4	41.4	41.4
15.0	41.4	41.4	41.4	41.4	41.4	41.4
18.0	41.4	41.4	41.4	41.4	41.4	41.4
22.5	41.4	41.4	41.4	41.4	41.4	41.4
27.0	41.4	41.4	41.4	41.4	41.4	41.4
31.5	41.4	41.4	41.4	41.4	41.4	41.4
36.0	41.4	41.4	41.4	41.4	41.4	41.4
40.5	41.4	41.4	41.4	41.4	41.4	41.4
45.0	41.4	41.4	41.4	41.4	41.4	41.4
50.0	41.4	41.4	41.4	41.4	41.4	41.4
56.0	41.4	41.4	41.4	41.4	41.4	41.4
63.0	41.4	41.4	41.4	41.4	41.4	41.4
70.0	41.4	41.4	41.4	41.4	41.4	41.4
78.0	41.4	41.4	41.4	41.4	41.4	41.4
86.0	41.4	41.4	41.4	41.4	41.4	41.4
95.0	41.4	41.4	41.4	41.4	41.4	41.4

A-Weighted Sound Level
- dB re 20 uPa

12.5	1.1 %	
15.0		10.2 %
18.0		14 %
22.5		10.2 %
27.0		11.5 %
31.5		15.9 %
36.0		13 %
40.5		7.3 %
45.0		6.3 %
50.0		3.4 %
56.0	1.9 %	
63.0	2.5 %	
70.0	1.9 %	
78.0	0.5 %	
86.0	* 0.2 %	

EQUIVALENT SOUND LEVEL = 38.9 DB

CUMULATIVE DISTRIBUTION

(%) EXCEEDED	SOUND PRESSURE LEVEL-DB
99	34
95	34
90	35
80	36
70	37
60	38
50	39
40	40
30	41
20	42
10	43
5	44

Background Ambient Sound Level Data

Location: 8
Date: July 11, 1983
Time: 2300

TABLE A-32

AMBIENT SOUND LEVEL DATA

FILE NO. 10000000

OCTAVE BAND	1/3	1/2	1	2	3	4	5	6	8	10
125	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
160	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
200	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
250	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
315	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
400	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
500	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
630	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
800	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
1000	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
1250	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
1600	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
2000	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
2500	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
3150	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
4000	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
5000	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
6300	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
8000	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
10000	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0

A-Weighted Sound Level
dB re 20 μPa

125	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
160	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
200	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
250	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
315	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
400	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
500	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
630	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
800	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
1000	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
1250	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
1600	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
2000	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
2500	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
3150	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
4000	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
5000	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
6300	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
8000	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
10000	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

EQUIVALENT SOUND LEVEL = 42.1 DB

CUMULATIVE DISTRIBUTION

NO. EXCEEDED	SOUND PRESSURE LEVEL-DB
100	36
90	38
80	39
70	40
60	40
50	40
40	41
30	41
20	41
10	42
5	42
2	43
1	43
0	44
0	44
0	45

Background Ambient Sound Level Data

Location: 8
Date: July 12, 1983
Time: 1530

TABLE A-33

AMBIENT SOUND LEVEL DATA

FILE B0940.DA

OCTAVE BAND HZ.	100 DB	L 1	L 10	L 50	L 90	L 99
11.2	51.5	48	48	55	52	50
12.5	51.5	49	49	54	52	50
14.1	51.5	44	44	51	49	47
15.8	51.5	44	44	50	48	46
17.7	51.5	43	43	49	47	44
19.8	51.5	42	42	48	46	44
22.0	51.5	42	42	47	45	44
24.5	51.5	42	42	46	44	44
27.3	51.5	42	42	45	43	44
30.4	51.5	42	42	44	42	44
33.9	51.5	42	42	43	41	44
37.7	51.5	42	42	42	40	44
41.9	51.5	42	42	41	39	44
46.5	51.5	42	42	40	38	44
51.5	51.5	42	42	39	37	44

A-Weighted Sound Level
- dB re 20uPa

```

11.2 0.9 %
12.5 1.1 %
14.1 2.3 %
15.8 2.1 %
17.7 2.1 %
19.8 3.1 %
22.0 8.1 %
24.5 7.8 %
27.3 9.4 %
30.4 12.4 %
33.9 17 %
37.7 15.5 %
41.9 8.8 %
46.5 2.9 %
51.5 0.5 %
55.9 0.5 %
59.9 0.3 %
63.9 0.1 %
70 * 0.1 %

```

EQUIVALENT SOUND LEVEL = 49.5 DB

CUMULATIVE DISTRIBUTION

AND EXCEEDED	SOUND PRESSURE LEVEL-DB
11.2	44
12.5	44
14.1	44
15.8	44
17.7	44
19.8	44
22.0	44
24.5	44
27.3	44
30.4	44
33.9	44
37.7	44
41.9	44
46.5	44
51.5	44
55.9	44
59.9	44
63.9	44
67.9	44
71.9	44
75.9	44
79.9	44
83.9	44
87.9	44
91.9	44
95.9	44
99.9	44

Background Ambient Sound Level Data

Location: 8
Date: July 12, 1983
Time: 1555

TABLE A-35

AMBIENT SOUND LEVEL DATA

FILE B0042.D8

OCTAVE BAND	1/3	1/2	1	2	3	5	10
HZ.	125	250	500	1000	2000	4000	8000
125	44.4	44.4	44.4	44.4	44.4	44.4	44.4
250	44.4	44.4	44.4	44.4	44.4	44.4	44.4
500	44.4	44.4	44.4	44.4	44.4	44.4	44.4
1000	44.4	44.4	44.4	44.4	44.4	44.4	44.4
2000	44.4	44.4	44.4	44.4	44.4	44.4	44.4
4000	44.4	44.4	44.4	44.4	44.4	44.4	44.4
8000	44.4	44.4	44.4	44.4	44.4	44.4	44.4

A-Weighted Sound Level - dB re 20µPa

PERCENT EXCEEDED	SOUND PRESSURE LEVEL-DB
99.9	41
99.5	41
99.0	41
98.5	41
98.0	41
97.5	41
97.0	41
96.5	41
96.0	41
95.5	41
95.0	41
94.5	41
94.0	41
93.5	41
93.0	41
92.5	41
92.0	41
91.5	41
91.0	41
90.5	41
90.0	41
90.5	41
90.0	41
89.5	41
89.0	41
88.5	41
88.0	41
87.5	41
87.0	41
86.5	41
86.0	41
85.5	41
85.0	41
84.5	41
84.0	41
83.5	41
83.0	41
82.5	41
82.0	41
81.5	41
81.0	41
80.5	41
80.0	41
79.5	41
79.0	41
78.5	41
78.0	41
77.5	41
77.0	41
76.5	41
76.0	41
75.5	41
75.0	41
74.5	41
74.0	41
73.5	41
73.0	41
72.5	41
72.0	41
71.5	41
71.0	41
70.5	41
70.0	41
69.5	41
69.0	41
68.5	41
68.0	41
67.5	41
67.0	41
66.5	41
66.0	41
65.5	41
65.0	41
64.5	41
64.0	41
63.5	41
63.0	41
62.5	41
62.0	41
61.5	41
61.0	41
60.5	41
60.0	41
59.5	41
59.0	41
58.5	41
58.0	41
57.5	41
57.0	41
56.5	41
56.0	41
55.5	41
55.0	41
54.5	41
54.0	41
53.5	41
53.0	41
52.5	41
52.0	41
51.5	41
51.0	41
50.5	41
50.0	41
49.5	41
49.0	41
48.5	41
48.0	41
47.5	41
47.0	41
46.5	41
46.0	41
45.5	41
45.0	41
44.5	41
44.0	41
43.5	41
43.0	41
42.5	41
42.0	41
41.5	41
41.0	41
40.5	41
40.0	41
39.5	41
39.0	41
38.5	41
38.0	41
37.5	41
37.0	41
36.5	41
36.0	41
35.5	41
35.0	41
34.5	41
34.0	41
33.5	41
33.0	41
32.5	41
32.0	41
31.5	41
31.0	41
30.5	41
30.0	41
29.5	41
29.0	41
28.5	41
28.0	41
27.5	41
27.0	41
26.5	41
26.0	41
25.5	41
25.0	41
24.5	41
24.0	41
23.5	41
23.0	41
22.5	41
22.0	41
21.5	41
21.0	41
20.5	41
20.0	41
19.5	41
19.0	41
18.5	41
18.0	41
17.5	41
17.0	41
16.5	41
16.0	41
15.5	41
15.0	41
14.5	41
14.0	41
13.5	41
13.0	41
12.5	41
12.0	41
11.5	41
11.0	41
10.5	41
10.0	41
9.5	41
9.0	41
8.5	41
8.0	41
7.5	41
7.0	41
6.5	41
6.0	41
5.5	41
5.0	41
4.5	41
4.0	41
3.5	41
3.0	41
2.5	41
2.0	41
1.5	41
1.0	41
0.5	41
0.0	41

EQUIVALENT SOUND LEVEL = 48.9 DB

Background Ambient Sound Level Data

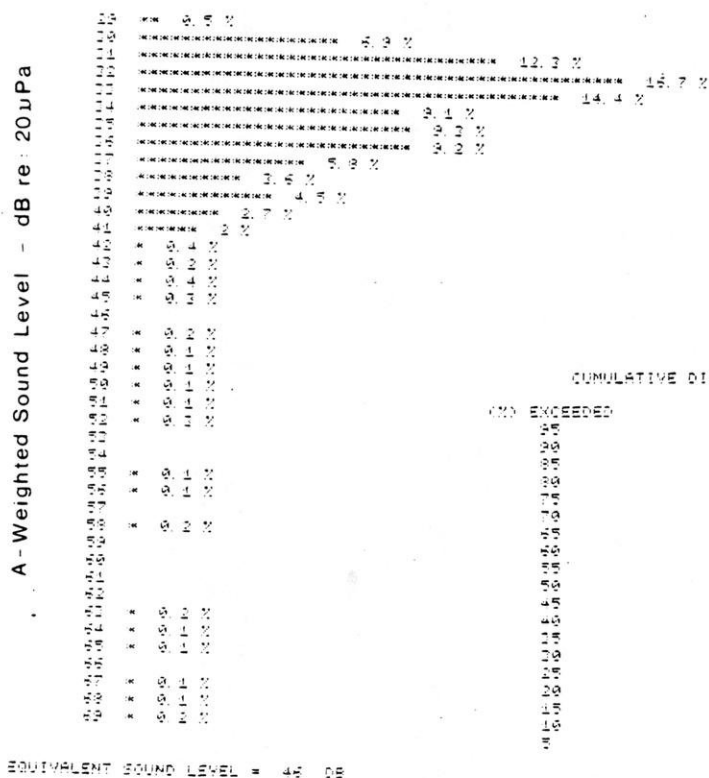
Location: 7
Date: July 12, 1983
Time: 1530

TABLE A-36

AMBIENT SOUND LEVEL DATA

FILE 80943.DR

OCTAVE BAND Hz	LEQ dB	L 1	L 10	L 50	L 90	L 95
31.5	41.1	41.1	37	36	34	24
35.5	40.1	40.1	37	36	34	24
40.0	40.1	40.1	37	36	34	24
45.0	40.1	40.1	37	36	34	24
50.0	40.1	40.1	37	36	34	24
56.2	40.1	40.1	37	36	34	24
63.5	40.1	40.1	37	36	34	24
71.0	40.1	40.1	37	36	34	24
79.6	40.1	40.1	37	36	34	24
89.5	40.1	40.1	37	36	34	24
100.0	40.1	40.1	37	36	34	24
112.2	40.1	40.1	37	36	34	24
125.9	40.1	40.1	37	36	34	24
140.0	40.1	40.1	37	36	34	24
156.5	40.1	40.1	37	36	34	24
175.4	40.1	40.1	37	36	34	24
195.8	40.1	40.1	37	36	34	24
218.9	40.1	40.1	37	36	34	24
244.7	40.1	40.1	37	36	34	24



Background Ambient Sound Level Data

Location: 9
Date: July 12, 1983
Time: 1825

TABLE A-39

AMBIENT SOUND LEVEL DATA

FILE ECR46.DR

OCTAVE BAND Hz	LEQ dB	L 1	L 10	L 50	L 90	L 99
11.2	44.1	47	46	29	26	25
12.5	41.1	43	42	31	29	28
14.1	41.1	43	42	24	24	24
16.0	40.1	42	41	24	24	24
18.2	40.1	42	41	24	24	24
20.6	40.1	42	41	24	24	24
23.2	40.1	42	41	24	24	24
26.0	40.1	42	41	24	24	24
29.1	40.1	42	41	24	24	24
32.4	40.1	42	41	24	24	24
36.0	40.1	42	41	24	24	24
40.0	40.1	42	41	24	24	24
44.3	40.1	42	41	24	24	24

A-Weighted Sound Level - dB re 20µPa

11.2	44.1	47	46	29	26	25
12.5	41.1	43	42	31	29	28
14.1	41.1	43	42	24	24	24
16.0	40.1	42	41	24	24	24
18.2	40.1	42	41	24	24	24
20.6	40.1	42	41	24	24	24
23.2	40.1	42	41	24	24	24
26.0	40.1	42	41	24	24	24
29.1	40.1	42	41	24	24	24
32.4	40.1	42	41	24	24	24
36.0	40.1	42	41	24	24	24
40.0	40.1	42	41	24	24	24
44.3	40.1	42	41	24	24	24

CUMULATIVE DISTRIBUTION

AND EXCEEDED	SOUND PRESSURE LEVEL-DB
10	45
20	44
30	43
40	42
50	41
60	40
70	39
80	38
90	37
100	36

EQUIVALENT SOUND LEVEL = 37.2 DB

Background Ambient Sound Level Data

Location: 10
Date: July 12, 1983
Time: 2055

TABLE A-42

AMBIENT SOUND LEVEL DATA

FILE SCF49.DA

OCTAVE BAND Hz	LEQ dB	L 1	L 10	L 50	L 90	L 99
31.5	41	41	36	27	26	25
63	38	38	32	21	20	19
125	34	34	24	14	14	14
250	34	34	24	14	14	14
500	34	34	24	14	14	14
1000	34	34	24	14	14	14
2000	34	34	24	14	14	14
4000	34	34	24	14	14	14
8000	34	34	24	14	14	14
A-UT	29	19	27	25	25	25

A-Weighted Sound Level
- dB re 20µPa

55.4

22.2

CUMULATIVE DISTRIBUTION

(%) EXCEEDED

SOUND PRESSURE LEVEL-DB

EQUIVALENT SOUND LEVEL = 29 DB

Background Ambient Sound Level Data

Location: 10
Date: July 12, 1983
Time: 2315

TABLE A-43
AMBIENT SOUND LEVEL DATA

FILE 20950.DR

OCTAVE BAND	LEQ	L	L	L	L	L
Hz	dB	1	10	50	90	99
12.5	44.0	44	32	27	25	25
15.8	43.0	43	31	26	24	24
20.0	42.0	42	30	25	24	24
25.1	41.0	41	29	24	24	24
31.5	40.0	40	28	24	24	24
39.8	39.0	39	27	24	24	24
50.1	38.0	38	26	24	24	24
63.2	37.0	37	25	24	24	24
79.6	36.0	36	24	24	24	24
100.0	35.0	35	24	24	24	24
125.9	34.0	34	24	24	24	24
159.1	33.0	33	24	24	24	24
200.0	32.0	32	24	24	24	24
251.9	31.0	31	24	24	24	24
315.1	30.0	30	24	24	24	24
398.0	29.0	29	24	24	24	24
501.2	28.0	28	24	24	24	24
632.0	27.0	27	24	24	24	24
796.0	26.0	26	24	24	24	24
1000	25.0	25	24	24	24	24
1259	24.0	24	24	24	24	24
1591	23.0	23	24	24	24	24
2000	22.0	22	24	24	24	24
2512	21.0	21	24	24	24	24
3150	20.0	20	24	24	24	24
3981	19.0	19	24	24	24	24
5012	18.0	18	24	24	24	24
6320	17.0	17	24	24	24	24
7960	16.0	16	24	24	24	24
10000	15.0	15	24	24	24	24
12590	14.0	14	24	24	24	24
15910	13.0	13	24	24	24	24
20000	12.0	12	24	24	24	24
25120	11.0	11	24	24	24	24
31500	10.0	10	24	24	24	24
39810	9.0	9	24	24	24	24
50120	8.0	8	24	24	24	24
63200	7.0	7	24	24	24	24
79600	6.0	6	24	24	24	24
100000	5.0	5	24	24	24	24
125900	4.0	4	24	24	24	24
159100	3.0	3	24	24	24	24
200000	2.0	2	24	24	24	24
251200	1.0	1	24	24	24	24
315000	0.0	0	24	24	24	24
398100	-1.0	-1	24	24	24	24
501200	-2.0	-2	24	24	24	24
632000	-3.0	-3	24	24	24	24
796000	-4.0	-4	24	24	24	24
1000000	-5.0	-5	24	24	24	24

A-Weighted Sound Level
 - dB re 20 μPa

NO	EXCEEDED	SOUND PRESSURE LEVEL-DB
1	1	24
2	2	24
3	3	24
4	4	24
5	5	24
6	6	24
7	7	24
8	8	24
9	9	24
10	10	24
11	11	24
12	12	24
13	13	24
14	14	24
15	15	24
16	16	24
17	17	24
18	18	24
19	19	24
20	20	24
21	21	24
22	22	24
23	23	24
24	24	24
25	25	24
26	26	24
27	27	24
28	28	24
29	29	24
30	30	24
31	31	24
32	32	24
33	33	24
34	34	24
35	35	24
36	36	24
37	37	24
38	38	24
39	39	24
40	40	24
41	41	24
42	42	24
43	43	24
44	44	24
45	45	24
46	46	24
47	47	24
48	48	24
49	49	24
50	50	24
51	51	24
52	52	24
53	53	24
54	54	24
55	55	24
56	56	24
57	57	24
58	58	24
59	59	24
60	60	24
61	61	24
62	62	24
63	63	24
64	64	24
65	65	24
66	66	24
67	67	24
68	68	24
69	69	24
70	70	24
71	71	24
72	72	24
73	73	24
74	74	24
75	75	24
76	76	24
77	77	24
78	78	24
79	79	24
80	80	24
81	81	24
82	82	24
83	83	24
84	84	24
85	85	24
86	86	24
87	87	24
88	88	24
89	89	24
90	90	24
91	91	24
92	92	24
93	93	24
94	94	24
95	95	24
96	96	24
97	97	24
98	98	24
99	99	24
100	100	24

EQUIVALENT SOUND LEVEL = 29.1 DB

Background Ambient Sound Level Data

Location: 10
 Date: July 12, 1983
 Time: 2345

TABLE A-44

AMBIENT SOUND LEVEL DATA

FILM MODEL, DBC

OCTAVE BAND	1/3	1/2	1	2	3	5	10	20	30	50	100
125	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
150	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
200	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
250	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
315	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
400	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
500	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
630	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
800	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
1000	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
1250	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
1600	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
2000	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
2500	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
3150	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
4000	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
5000	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
6300	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
8000	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
10000	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0

A-Weighted Sound Level - dB re 20µPa

125	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
150	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
200	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
250	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
315	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
400	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
500	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
630	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
800	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
1000	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
1250	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
1600	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
2000	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
2500	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
3150	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
4000	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
5000	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
6300	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
8000	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
10000	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0

EQUIVALENT SOUND LEVEL = 44.2 DB

CUMULATIVE DISTRIBUTION

NO	ENC	RECEIVED	SOUND PRESSURE LEVEL-DB
1	44.0	44.0	44.0
2	44.0	44.0	44.0
3	44.0	44.0	44.0
4	44.0	44.0	44.0
5	44.0	44.0	44.0
6	44.0	44.0	44.0
7	44.0	44.0	44.0
8	44.0	44.0	44.0
9	44.0	44.0	44.0
10	44.0	44.0	44.0
11	44.0	44.0	44.0
12	44.0	44.0	44.0
13	44.0	44.0	44.0
14	44.0	44.0	44.0
15	44.0	44.0	44.0
16	44.0	44.0	44.0
17	44.0	44.0	44.0
18	44.0	44.0	44.0
19	44.0	44.0	44.0
20	44.0	44.0	44.0

Background Ambient Sound Level Data

Location: 9
Date: July 13, 1983
Time: 1205

TABLE A-46

AMBIENT SOUND LEVEL DATA

FILE ECR53.DR

OCTAVE BAND HZ.	LED DB	L 1	L 10	L 50	L 90	L 99
12.5	42.8	54	44	37	33	31
15.6	39.7	48	37	34	33	32
19.9	36.6	43	33	29	27	26
25.0	33.5	38	30	27	24	24
31.2	30.4	33	26	23	23	24
37.5	27.3	28	22	20	24	24
44.9	24.2	23	18	16	27	24
53.1	21.1	18	13	12	27	24
62.5	18.0	13	11	10	24	24
73.1	15.0	8	8	8	24	31

A-Weighted Sound Level	11.8	* 0.3 %
- dB re 20 uPa	11.8	0.8 %
	11.8	1.7 %
	11.8	1.3 %
	11.8	5.3 %
	11.8	10.8 %
	11.8	13 %
	11.8	12 %
	11.8	11.8 %
	11.8	10.7 %
	11.8	10.8 %
	11.8	9.4 %
	11.8	5.6 %
	11.8	2.5 %
	11.8	2 %
	11.8	0.8 %
	11.8	* 0.3 %

EQUIVALENT SOUND LEVEL = 38.9 DB

CUMULATIVE DISTRIBUTION

(%) EXCEEDED	SOUND PRESSURE LEVEL-DB
95	34
90	34
80	35
70	35
60	36
50	37
40	37
30	37
20	38
10	38
5	39
3	40
2	40
1	41
0.5	41
0.2	42
0.1	43

Background Ambient Sound Level Data

Location: 10
Date: July 13, 1983
Time: 1655

TABLE A-47

AMBIENT, SOUND LEVEL DATA

FILE 00004.DR

OCTAVE BAND	L ₁	L ₂	L ₃	L ₄	L ₅
125	44.0	44.0	44.0	44.0	44.0
150	44.0	44.0	44.0	44.0	44.0
200	44.0	44.0	44.0	44.0	44.0
250	44.0	44.0	44.0	44.0	44.0
315	44.0	44.0	44.0	44.0	44.0
400	44.0	44.0	44.0	44.0	44.0
500	44.0	44.0	44.0	44.0	44.0
630	44.0	44.0	44.0	44.0	44.0
800	44.0	44.0	44.0	44.0	44.0
1000	44.0	44.0	44.0	44.0	44.0
1250	44.0	44.0	44.0	44.0	44.0
1600	44.0	44.0	44.0	44.0	44.0
2000	44.0	44.0	44.0	44.0	44.0
2500	44.0	44.0	44.0	44.0	44.0
3150	44.0	44.0	44.0	44.0	44.0
4000	44.0	44.0	44.0	44.0	44.0
5000	44.0	44.0	44.0	44.0	44.0
6300	44.0	44.0	44.0	44.0	44.0
8000	44.0	44.0	44.0	44.0	44.0
10000	44.0	44.0	44.0	44.0	44.0

A-Weighted Sound Level
- dB re 20µPa

125	44.0	44.0	44.0	44.0	44.0
150	44.0	44.0	44.0	44.0	44.0
200	44.0	44.0	44.0	44.0	44.0
250	44.0	44.0	44.0	44.0	44.0
315	44.0	44.0	44.0	44.0	44.0
400	44.0	44.0	44.0	44.0	44.0
500	44.0	44.0	44.0	44.0	44.0
630	44.0	44.0	44.0	44.0	44.0
800	44.0	44.0	44.0	44.0	44.0
1000	44.0	44.0	44.0	44.0	44.0
1250	44.0	44.0	44.0	44.0	44.0
1600	44.0	44.0	44.0	44.0	44.0
2000	44.0	44.0	44.0	44.0	44.0
2500	44.0	44.0	44.0	44.0	44.0
3150	44.0	44.0	44.0	44.0	44.0
4000	44.0	44.0	44.0	44.0	44.0
5000	44.0	44.0	44.0	44.0	44.0
6300	44.0	44.0	44.0	44.0	44.0
8000	44.0	44.0	44.0	44.0	44.0
10000	44.0	44.0	44.0	44.0	44.0

EQUIVALENT SOUND LEVEL = 49.4 DB

CUMULATIVE DISTRIBUTION

(N)	PERCENT	SOUND PRESSURE LEVEL-DB
1	100	44.0
2	90	44.0
3	80	44.0
4	70	44.0
5	60	44.0
6	50	44.0
7	40	44.0
8	30	44.0
9	20	44.0
10	10	44.0
11	0	44.0

Background Ambient Sound Level Data

Location: 10
Date: July 13, 1983
Time: 1725

TABLE A-48

METEOROLOGICAL CONDITIONS

<u>LOCATION</u>	<u>DATE</u>	<u>SAMPLING INTERVAL</u>	<u>TEMPERATURE (°C)</u>	<u>HUMIDITY (%)</u>	<u>WIND SPEED (m/s)</u>
<u>WINTER</u>					
7	3/30/83	1225	7	39	2 - 4
8	3/30/83	1345	6.5	68	1 - 4
9	3/30/83	1000	4	56	0 - 3
10	3/30/83	1118	6	48	0 - 4
7	3/29/83	2100	-0.5	65	3
8	3/30/83	2045	4	85	0 - 1
9	3/30/83	1910	4	85	0 - 1
10	3/30/83	1800	5	70	1 - 3
7	3/30/83	2340	2.5	90	0 - 1
8	3/31/83	0100	2.5	90	0
9	3/29/83	2245	-2	75	0
10	3/30/83	2225	2.5	90	0 - 1
<u>SUMMER</u>					
7	7/12/83	1500	32	60	0 - 2
8	7/12/83	1530	28	68	1 - 3
9	7/13/83	1205	31	76	0 - 2
10	7/13/83	1655	30	68	0 - 2
7	7/11/83	1910	28	74	0 - 2
8	7/11/83	2036	26	80	2 - 6
9	7/12/83	1825	24	58	2 - 4
10	7/12/83	2025	23	85	0
7	7/11/83	2350	27	68	2 - 5
8	7/11/83	2230	24	58	2 - 4
9	7/12/83	2200	20	85	0 - 2
10	7/12/83	2315	19	90	0 - 2



UW-STEVENS POINT



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