EXHIBIT 11

Continued

APPENDIX I

SOUND BASICS

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SOUND AND DECIBELS

Sound is a rapid fluctuation in pressure that the human ear has the potential to detect. The decibel or dB is the unit of measurement for sound. The decibel scale is logarithmic to avoid large unmanageable numbers normally associated with pressure change. The following figure shows a comparison of sound pressure and decibel levels for some typical sound environments.

Sound level performance specifications often provide the sound power level emitted by a particular noise source such as a transformer. Similar to sound pressure level, the sound power level or L_w is a logarithmic measure of sound expressed in decibels compared to a specified reference level. The difference is that the reference level for sound power is 10^{-12} watts compared to the reference level for sound pressure which is in units of micropascals.

Undesirable sound is generally referred to as *noise*. The effects of noise depend both on its frequency (or pitch), decibel level, and duration, particularly in relationship to changes in existing sound levels. The frequency of a sound generally refers to the number of vibrations per second, measured in hertz (Hz). The frequencies of sounds audible to humans range from about 20 Hz to 20,000 Hz, with greater sensitivity to frequencies above 1,000 Hz.

Sound may consist of a single frequency known as a pure tone, but is generally a disorderly mixture of many frequencies. When measuring sound, the A-weighted sound levels are typically used in order to simulate the hearing response of the human ear to varying sound level frequencies. A-weighted sound levels are expressed as dBA.

Sound propagation in air can be compared to ripples on the surface of a pond. The ripples spread out uniformly in all directions of the pond surface decreasing in amplitude as they move further from the source. For every doubling of distance from a stationary hemispherical noise source, the sound level drops by 6 dB. Thus if the sound level is 50 dBA at 500 feet, the sound level at 1000 feet will be 44 dBA, and will be 38 dBA at 2000 feet. With an obstacle in the sound path, such as intervening terrain or a building, part of the sound is reflected, part is absorbed and the remainder is transmitted through or around the object. The amount of sound that is reflected, absorbed or transmitted depends on the properties of the object, its size, and the frequency (Hz) of the sound. Properties of an object and its effect on sound propagation are primary considerations in the design of noise control measures.

For constant sounds, a brief measurement close to the source can generally quantify the level of sound over both long and short periods. However, when sound sources vary, longer sampling periods are needed to accurately quantify the sound levels. Integrating sound level meters are commonly used to measure fluctuating sound sources. These meters record the sound level every 1/8 of a second when set to fast response and every one-second on slow response. When set to fast, the instrument records 480 sound level measurements every minute and over 28,000 measurements in an hour. Due to the large number of readings, statistical parameters are used for analysis and comparison of measurement data.

The most commonly used parameter is the A-weighted equivalent sound level or L_{Aeq}. The L_{Aeq} is used to represent the sound energy during a given sampling period as a constant decibel level.

The L_{Aeq} takes all sound level fluctuations into account similar to an averaging technique; however, this is accomplished mathematically to deal with decibels as logarithmic expressions. At a site influenced by variable sounds such as vehicle or aircraft traffic, the L_{Aeq} distributes the traffic sound energy over the entire measurement period to calculate a single decibel level. Short periods of elevated sound levels can significantly increase L_{Aeq} over a measurement period. For example, if the sound level over an hour were 30 dBA except for five minutes when traffic noise measured 60 dBA, the L_{Aeq} for the hour would be 49 dBA.

Other common statistical parameters include L_{A1}, L_{A10}, L_{A50} and L_{A90}, which represent the sound level exceeded 1%, 10%, 50%, and 90% of the time during the measurement, respectively. The L_{A10} is used to describe the average of the maximum sound levels during a measurement. The L_{A90} excludes most transient or intermittent noise sources and therefore, is commonly used to determine the value of constant or *background* sound during a measurement.

In order to calculate sound levels resulting from multiple noise sources, such as multiple wind turbines, it is necessary to combine decibel levels from each source. Decibel levels must be added mathematically to reflect the logarithmic nature of the decibel unit. When two sounds of the same decibel level are combined, the resulting combined sound level is just 3 dB higher than the individual sound levels (i.e. 50 dB + 50 dB = 53 dB). Sound level meters per ANSI are designed to integrate all sounds received at a particular location and report the combined result.

The American National Standards Institute (ANSI S1.1-1994) and the Maine DEP have similar definitions of **ambient sound level**. The ANSI definition is: *"All-encompassing sound at a given place, usually a composite of sounds from many sources near and far."* The Maine DEP definition is found in Chapter 375.10, Control of Noise, Section G (1): *"At a specified time, the all-encompassing sound associated with a given environment, being usually a composite of sounds from many sources at many directions, near and far, including the specific development."* The DEP definition of **pre-development ambient sound level** is: *"The ambient sound at a specified location in the vicinity of a development site prior to the construction and operation of the proposed development or expansion."* [Ref. 375.10 G (15)].

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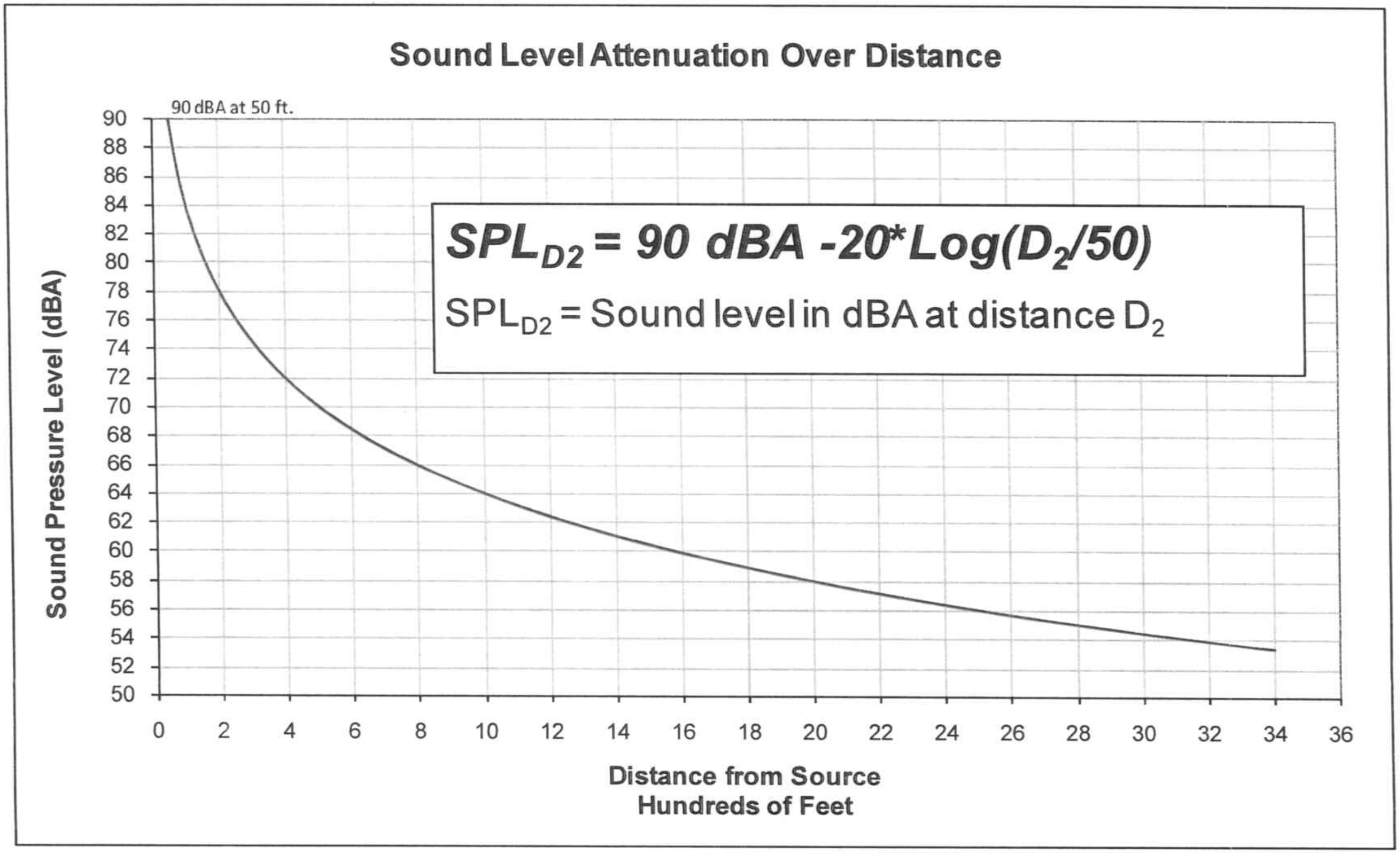
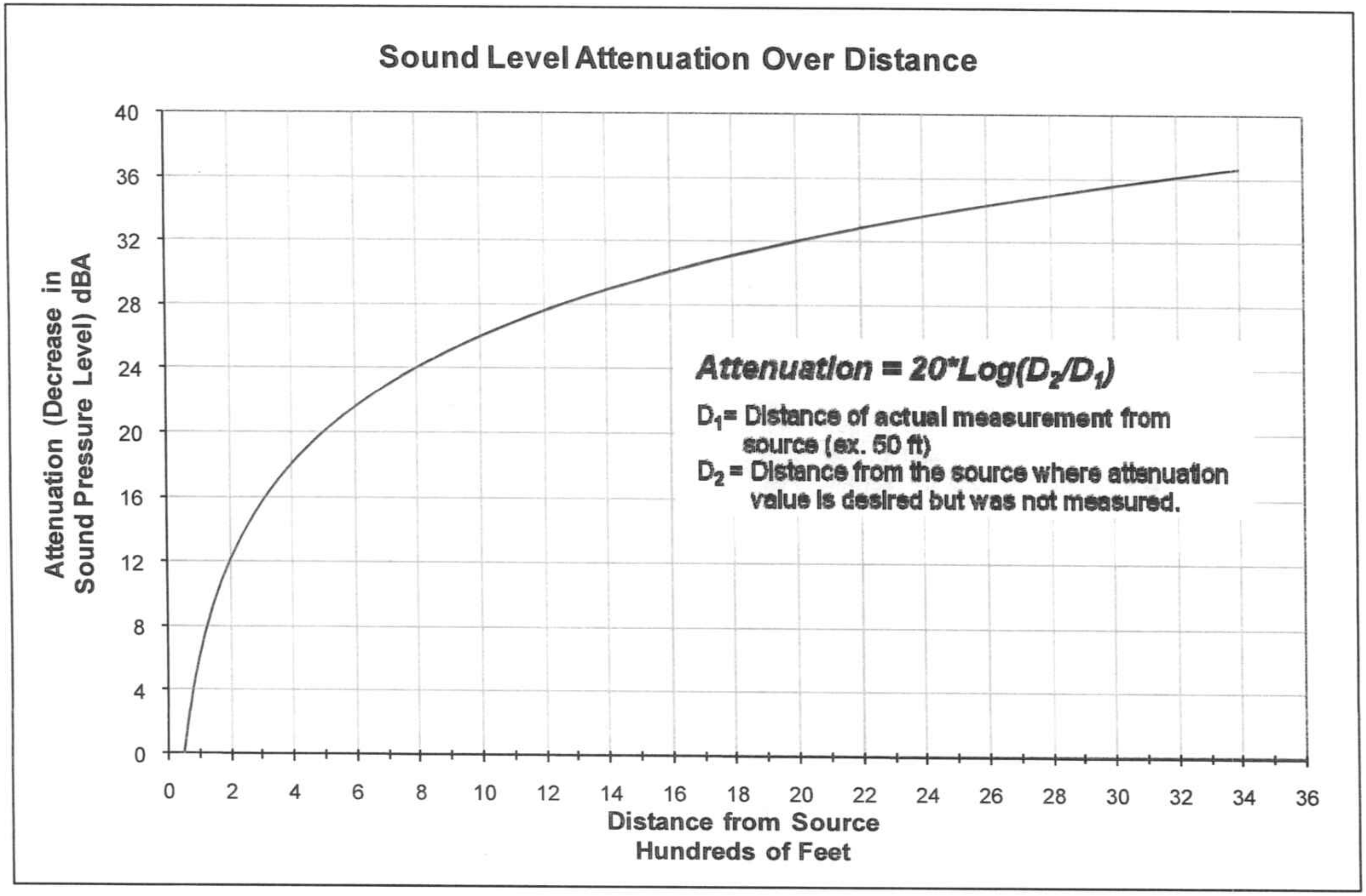


Sound Level Attenuation Over Distance
90 dBA at 50 ft.
SPL_D2 = 90 dBA -20*Log(D2/50)
SPL_D2 = Sound level in dBA at distance D2
Sound Pressure Level (dBA)
90
88
86
84
82
80
78
76
74
72
70
68
66
64
62
60
58
56
54
52
50
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
Distance from Source
Hundreds of Feet


Sound Level Attenuation Over Distance
Attenuation (Decrease in Sound Pressure Level) dBA
40
36
32
28
24
20
16
12
8
4
0
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36
Distance from Source
Hundreds of Feet
Attenuation = 20*Log(D2/D1)
D1= Distance of actual measurement from source (ex. 50 ft)
D2 = Distance from the source where attenuation value is desired but was not measured.

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OUTDOOR SOUND PROPAGATION

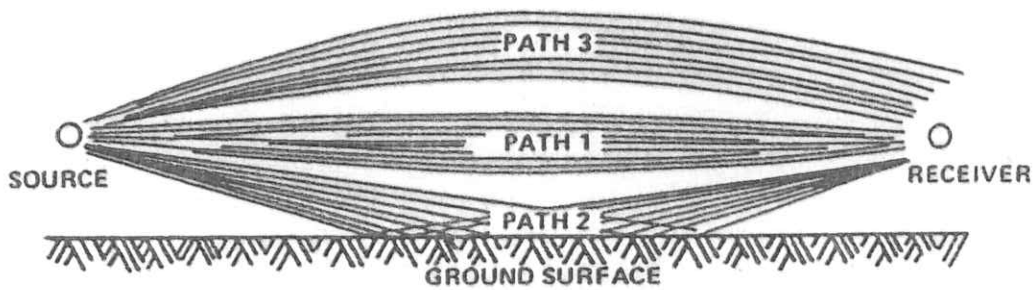
TERRAIN AND VEGETATION

Sound travels from a source to a receiver by three general paths:

Path 1 Direct Line-of-Sight

Path 2 Ground Reflected Path

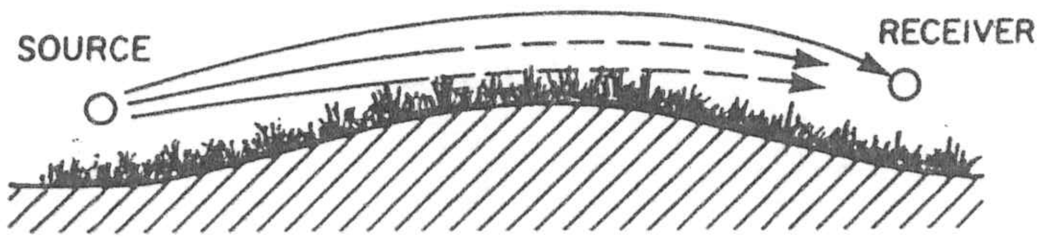
Path 3 Above the Ground Surface



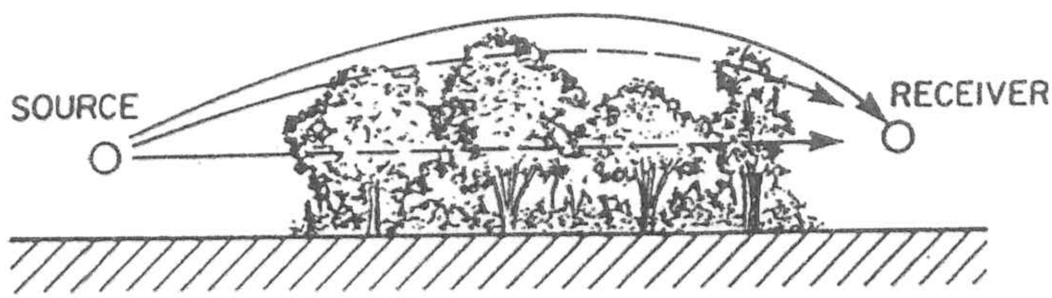
Concept of three paths involved in outdoor sound propagation: Path 1, direct sound; Path 2, ground-reflected path; Path 3, refracted and scattered path.

TERRAIN AND VEGETATION (Continued)

The attenuation due to absorptive ground cover increases over distance. Line-of-sight sound levels may be significantly reduced.



Path 3 provides sound energy when ground terrain absorbs or blocks direct sound path.



Path 3 Feeds Scattered Sound Energy over the Tops of Woods and Barriers When Direct Sound is Sufficiently Reduced

- Attenuation rates developed based on type of ground cover.
- Use conservatively in Maine due to frozen ground conditions resulting in reflection instead of absorption.

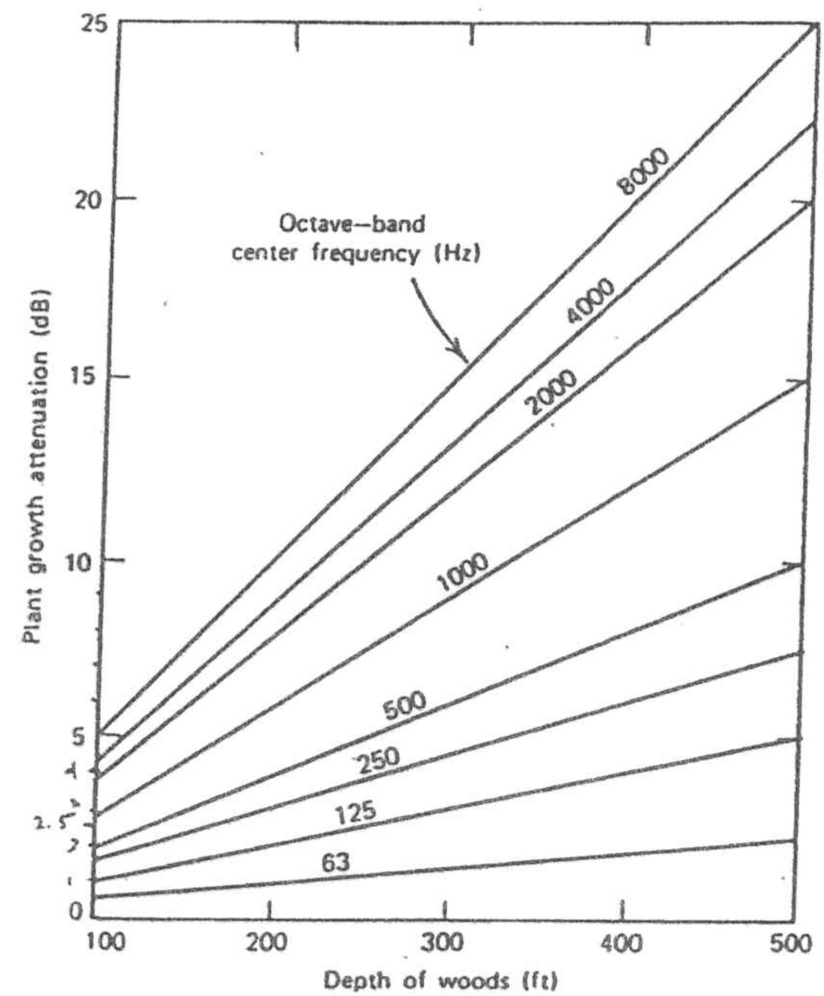
TERRAIN AND VEGETATION (Continued)

EXCESS SOUND ATTENUATION FOR SOUND TRANSMISSION ABOVE OR THROUGH ABSORPTIVE GROWTH

(attenuation in dB per 10 m Path Length)

Octave Frequency Band (Hz)	Sound Path Over or through Tall Thick Grass or Shrubbery [3]	Sound Path through Medium-Dense Woods [3]
31	—	0.3
63	0.1	0.4
125	0.7	0.5
250	1.2	0.6
500	1.8	0.8
1000	2.3	1.0
2000	2.8	1.3
4000	3.4	1.6
8000	3.9	2.0

TERRAIN AND VEGETATION (Continued)



Approximate attenuation of sound because of dense woods having a visibility penetration of 70 to 100 ft. (Courtesy of the American Petroleum Institute, ref. 22).

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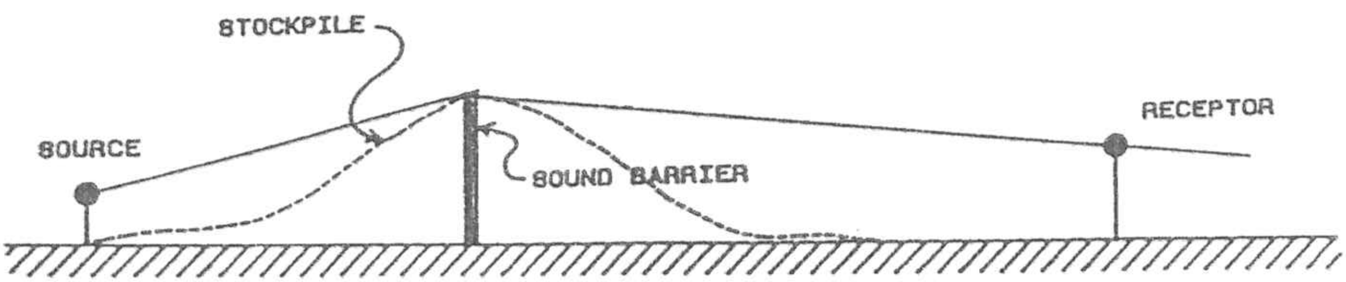
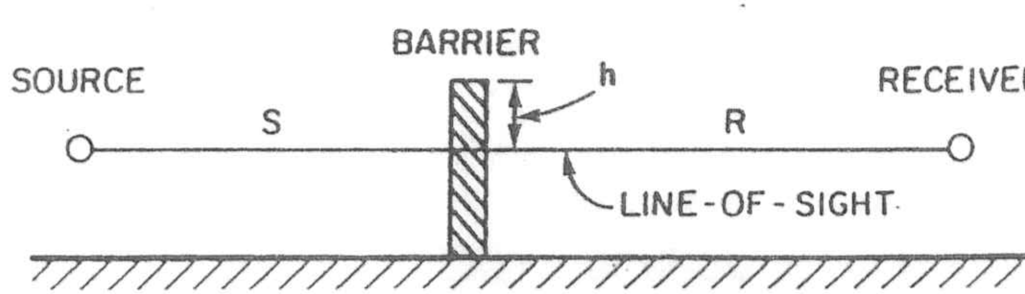
EFFECTS OF BARRIERS

- Barriers block the line-of-sight path between a sound source and receiver resulting in sound reduction in the shadow zone.
- Barriers may consist of buildings, walls, hills, material stockpiles, or other solid structures.

TYPICAL SOUND BARRIER PROFILE



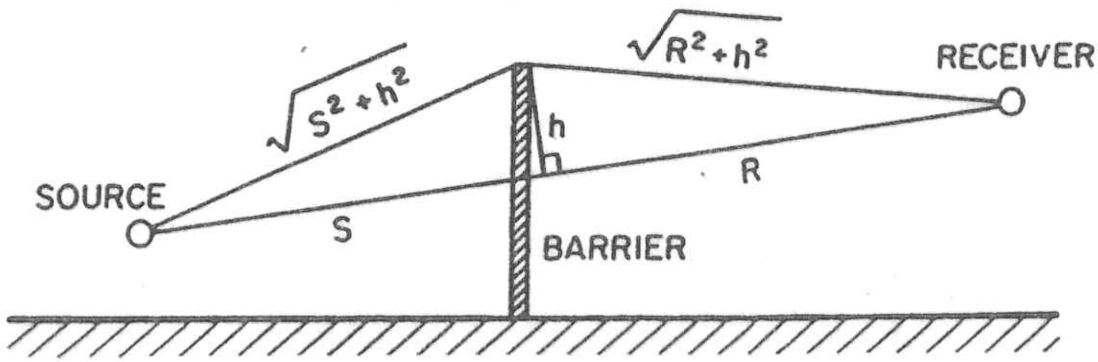


Geometrical details involved in evaluating the attenuation or insertion loss of a sound barrier.

EFFECTS OF BARRIERS (Continued)

To estimate the sound level reduction of the barrier:

(1) Calculate the "path length difference" or the difference between the length of the path traveled by sound and the line-of-sight difference.



Right triangle construction can be used to determine essential dimensions involved in barrier attenuation.

$$PLD = (\sqrt{S^2 + h^2} + \sqrt{R^2 + h^2}) - (S+R)$$

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EFFECTS OF BARRIERS (Continued)

(2) Estimate barrier attenuation by frequency using the following chart:

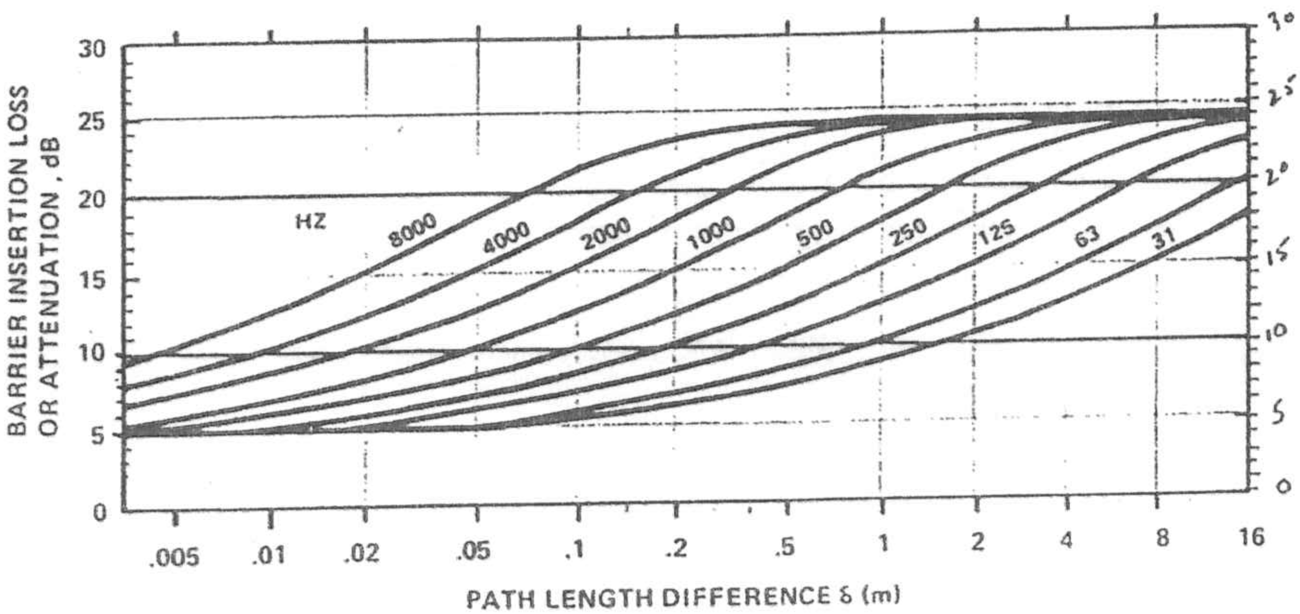


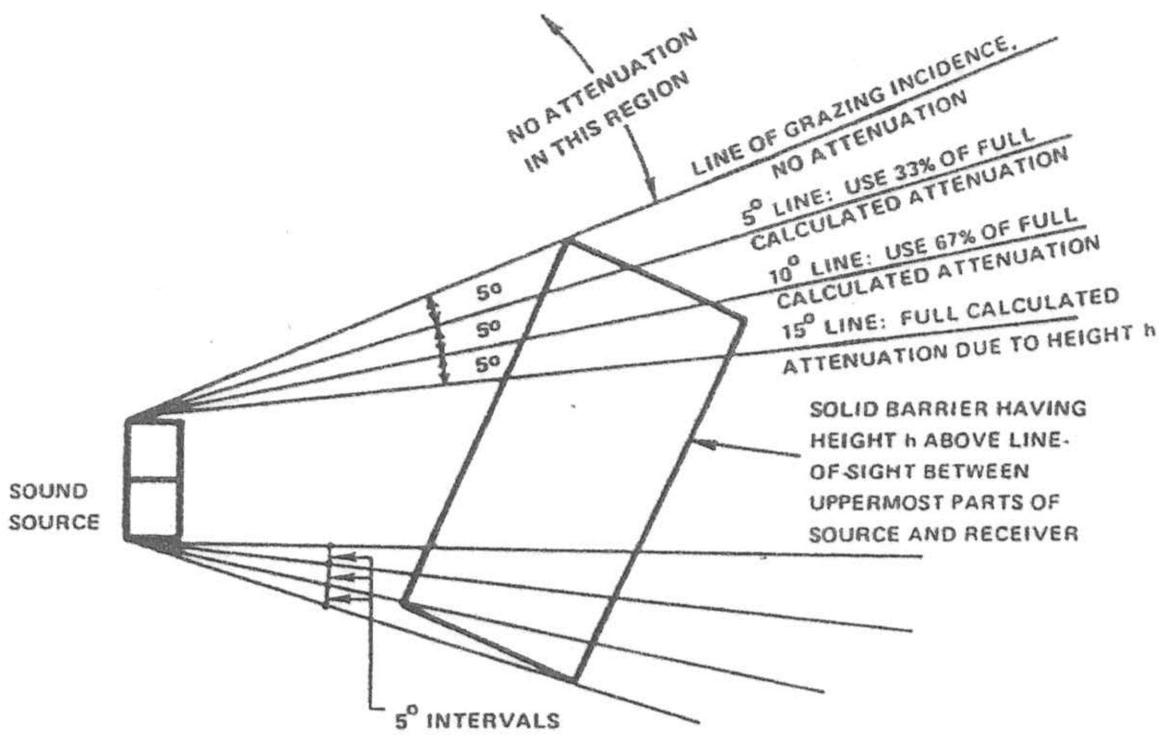
Chart for estimating maximum barrier attenuation at octave frequencies for a range of path length differences

(3) Subtract the barrier attenuation by frequency from the octave band sound levels.

(4) Calculate the total sound level by adding the resulting octave-band sound levels.

RESTRICTIONS

- Barrier attenuation depends on the length of the barrier relative to the source and receiver.
- Both S and R are less than 1,000 feet. Reduction of 10% can be applied for each additional 1,000 feet.
- For natural barriers, such as hills, that have different heights at different angles from the source, evaluate the sound attenuation along each radial line of interest from the source using the barrier height encountered by that radial line.



Plot plan showing regions of reduced attenuation at edges of shadow zone.

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RECORD HILL WIND LLC
RECORD HILL WIND PROJECT
OXFORD COUNTY
ROXBURY, MAINE

SUPPLEMENT TO:

SOUND LEVEL ASSESSMENT

CONFIDENTIAL INFORMATION

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File 070830/2.5.5.2

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(Remove Pre-Development Ambient Sound Level Information per MDEP)
Supplement: June 16, 2009

Resource
Systems
Engineering

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STATE OF MAINE
CHARLES F. WALLACE, JR.
No 4941
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PROFESSIONAL ENGINEER

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DISCLAIMER

This document has been prepared in accordance with generally accepted engineering practices associated with environmental acoustics. No other warranty, expressed or implied, is made.

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RECORD HILL WIND LLC
RECORD HILL WIND PROJECT
ROXBURY, OXFORD COUNTY, MAINE
Supplement TO:
SOUND LEVEL ASSESSMENT

CONTENTS

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LIST OF ACRONYMS

ANSI	American National Standards Institute
dB	Decibel (Unit of Sound Pressure or Sound Power Level)
dBA	Decibel A-weighted
DEP	Maine Department of Environmental Protection
Hz	Hertz (cycles per second)
ISO	International Organization for Standardization
kV	Kilovolt
kVA	Kilo Volt-Ampere
L_{A1}	Sound Level Exceeded 1% of a Measurement Period (dBA)
L_{A10}	Sound Level Exceeded 10% of a Measurement Period (dBA)
L_{A50}	Sound Level Exceeded 50% of a Measurement Period (dBA)
L_{A90}	Sound Level Exceeded 90% of a Measurement Period (dBA)
L_{Aeq}	Equivalent Sound Level
$L_{Aeq\text{-}Hr}$	Hourly Equivalent Sound Level
L_w	Sound Power Level
MW	Megawatts of Electric Power
mph	Miles per hour
MRSA	Maine Revised Statutes Annotated
msl	mean sea level
PDA	Pre-Development Ambient
PL	Receiver Point at a Protected Location
RHW	Record Hill Wind Project
RSE	Resource Systems Engineering
SLM	Sound Level Meter
SDRS	Short Duration Repetitive Sounds
SWT	Siemens Wind Turbine
WTG	Wind Turbine Generator

1.0 INTRODUCTION

Resource Systems Engineering (RSE) completed an analysis of sound levels for the Record Hill Wind Project (RHW), 50.6 (formerly a 55) megawatt (MW) wind energy facility to be located in the Town of Roxbury, Oxford County, Maine (see Figure 1-1 Project Site Map in Sound Level Assessment, January 20, 2009). The objectives of the sound assessment were to determine the expected sound levels from routine project operations and to compare RHW sound levels with relevant environmental noise standards.

Sound levels generated during construction and operation of many types of facilities can be regulated by federal, state, and local noise standards. The Maine Department of Environmental Protection (DEP) regulates noise under authority of the Site Location of Development Law (38 M.R.S.A 481-490). The current DEP noise regulation, Chapter 375.10, *Control of Noise*, was established in November 1989 to protect certain existing land uses, such as residential properties, schools, and recreation areas, from excessive noise levels generated by new or expanded developments.

RSE's original report was issued on December 1, 2008. On January 20, 2009, the report was edited at DEP's request to remove all measurement data, references and analyses related to pre-development ambient sound levels. Subsequent to the January 20, 2009 report, RHW has been negotiating with Siemens regarding the application of their 2.3 MW Mk II (a.k.a. SWT 2.3-93) wind turbine generator. The following report provides a supplement to the January 20, 2009 Sound Level Assessment (Assessment) report using the Siemens wind turbine generators in place of the Clipper C96. Sound power levels and resultant sound pressure levels at nearby protected locations are compared. The sound level estimates are compared to DEP sound level limits to demonstrate that the Record Hill Wind Project will meet applicable regulatory limits with the Siemens 2.3 MW Mk II wind turbine generators.

5.0 RECORD HILL WIND SOUND LEVELS

Future project sound levels will be produced by construction activity plus operation and maintenance of the wind turbine generators, electric collection facilities, sub-station and maintenance facility. Construction, operation and maintenance of the project remains the same as described in the January 20, 2009 Assessment for the electric collection system, sub-station and maintenance facility. Wind turbine generator construction sounds are expected to be similar to the Clipper C96 presented in the Assessment dated January 20, 2009. This supplement describes sound expected from operation of Siemens wind turbines.

5.2 Proposed Operation

Operation of the proposed project will consist of 22 wind turbines operating up to 24 hours per day, seven days per week producing up to 50.6 MW of electrical power. The actual level of power production will be governed by the wind speed at the hub height. The actual level of wind turbine sound will vary with electric power production.

RSE developed a sound level prediction model to estimate sound levels from operation of the proposed RHW Project. The acoustic model was developed using the CADNA/A software program performing calculations in accordance with the generally recognized standard for estimating the propagation of sound in the environment promulgated by the International Standards Organization (ISO) as Chapter 9613-2, *Attenuation of Sound During Propagation Outdoors*. CADNA/A uses three dimensional terrain, proposed wind turbine characteristics and locations plus environmental factors (e.g. meterological and ground cover) to calculate outdoor sound propagation from the wind turbines. Area topography and wind turbine locations, for entry into CADNA/A, were provided to RSE by Stantec Consulting based on USGS topographic information and project design. Information for the project study area is the same as Figure 3-1 in the January 20, 2009 Assessment and presented here on Figure 3-

1S. Figure 3-1S shows the turbine locations, USGS topographic contours, parcel mapping with hatching to show parcels with easements or agreements, dwelling locations, public and private roads, and water bodies.

The wind energy project will be capable of operating any time of the day or night, including holidays and weekends. However, the wind turbines will begin to rotate as the hub-height wind speed increases from 0 to 4 m/s (0 to 9 mph), the "cut-in" wind speed. When the wind incident on the turbine hub is at or above the "cut-in" wind speed of 4 m/s (9 mph) electrical power will be generated and delivered to the grid. During periods of light or calm hub winds, sound level emissions from RHW will be very low. As wind speed increases, the turbines begin to rotate and will reach full sound power output at approximately 9 meters per second (20 mph). Full electrical power output occurs when the hub-height wind speed is at or above 13 meters per second (29 mph). The turbines shutdown or "cut-out" when hub-height winds reach 25 meters per second (56 mph).

RSE calculated sound levels for simultaneous operation of the Siemens 2.3 MW Mk II wind turbines at all 22 prospective locations. Calculations were based on the apparent sound power spectrum produced at full sound power provided by Siemens. The wind turbines were treated as point sources at the hub height of 80 meters (262 feet) above base/grade elevation using sound power levels provided by ***WINDTEST, Kaiser-Wilhelm-Koog GmbH, Report of acoustical emissions of a Siemens wind turbine generator system of the type 2.3 MW Mk II, September 2005***. Siemens WTG apparent sound power levels are presented in Table 5-1S and Figure 5-1S. RSE computed sound power for whole octaves from the one-third octave spectrum provided by Siemens. Also provided below is Table 5-1, which sets forth computed sound power levels for the Clipper C96 that was the basis for RSE's original Sound Level Assessment for the Record Hill Wind Project.

TABLE 5-1S
WIND TURBINE SOUND POWER LEVELS (Wind Speed = 12.6 m/s at turbine hub)

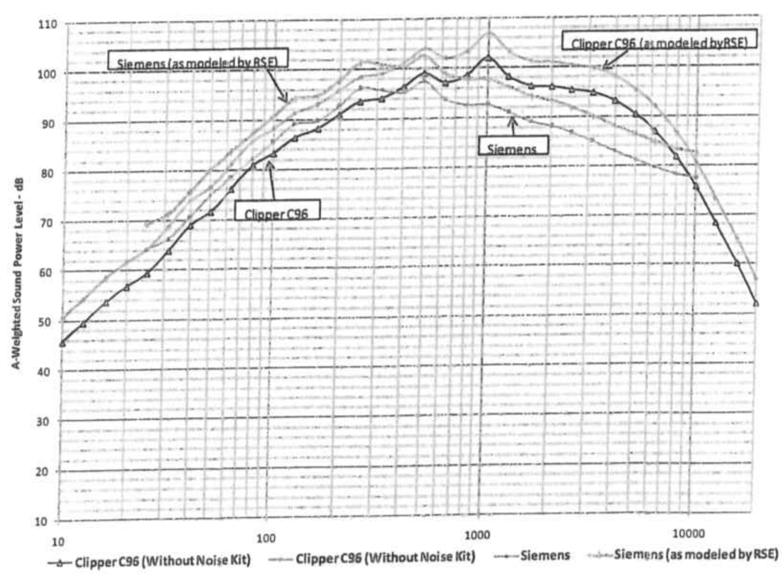
3rd Octave Band Center Frequency, Hz	Sound Power Level, dBA	Octave Band Center Frequency, Hz	Sound Power Level, dBA
50	75.1		
63	78.6	63	84.3
80	82.2		
100	85.7		
125	89.2	125	93.3
160	89.8		
200	92.8		
250	96.4	250	100.1
315	95.9		
400	95.4		
500	97.6	500	100.7
630	93.9		
800	92.7		
1000	92.7	1000	97.0
1250	91.2		
1600	89.2		
2000	88.3	2000	93
2500	86.9		
3150	85.1		
4000	83.1	4000	88.2
5000	81.3		
6300	79.8		
8000	78.3	8000	83.4
10000	77.5		
SUM	**105.1**	**SUM**	**105.1**

Source: WINDTEST, Kaiser-Wilhelm-Koog GmbH, Report of acoustical emissions of a Siemens wind turbine generator system of the type 2.3 MW Mk II, September 2005

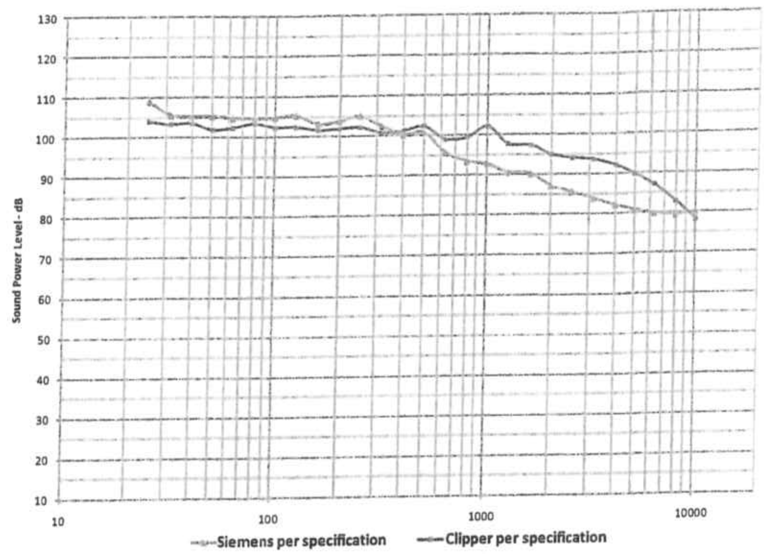
TABLE 5-1 WIND TURBINE SOUND POWER LEVELS (Wind Speed = 12.6 m/s at turbine hub)			
3rd Octave Band Center Frequency, Hz	Sound Power Level, dBA	Octave Band Center Frequency, Hz	Sound Power Level, dBA
50	71.6		
63	76.1	63	82.4
80	80.8		
100	83.2		
125	86.3	125	91.1
160	88.1		
200	90.9		
250	93.5	250	97.8
315	94.1		
400	96.3		
500	99	500	102.4
630	97.1		
800	98.5		
1000	102	1000	104.7
1250	98.2		
1600	96.3		
2000	96.1	2000	100.7
2500	95.4		
3150	94.8		
4000	93.1	4000	97.9
5000	90.3		
6300	86.9		
8000	81.7	8000	88.3
10000	75.7		
SUM	**108.6**	**SUM**	**108.6**
Source: Clipper C96 Specifications, July 30, 2008			

Figure 5-1S

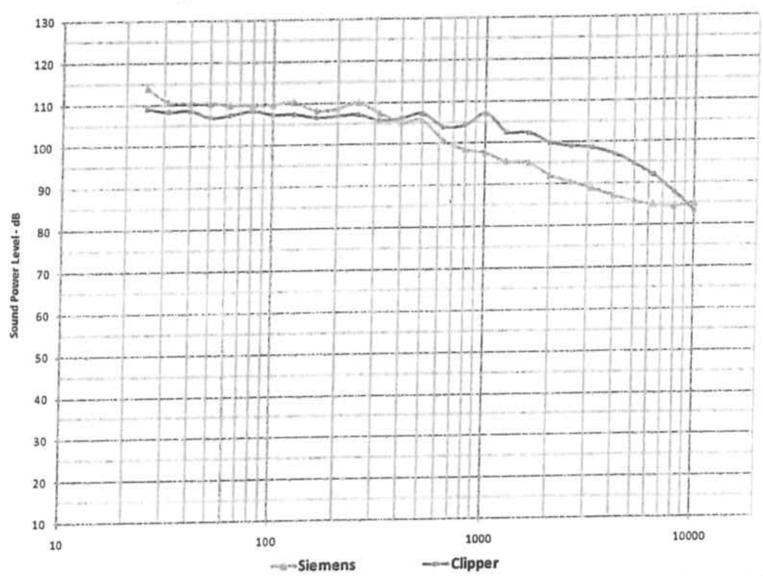
SIEMENS L_{WA} = 110.1 dB(A) (as modeled by RSE)
CLIPPER L_{WA} = 113.63 dB(A) (as modeled by RSE)



SIEMENS L_W = Linear Conversion re 105.1 dB(A) = 116.4 dB(L)
CLIPPER L_W = Linear Conversion re 108.63 dB(A) = 114.7 dB(L)



SIEMENS L_W = Linear Conversion re 110.1 dB(A) (as modeled by RSE) = 121.4 dB(L)
CLIPPER L_W = Linear Conversion re 113.63 dB(A) (as modeled by RSE) = 119.7 dB(L)



Source for above 3 figures: Siemens; WINDTEST Kaiser-Wilhelm-Koog GmbH, *Report of acoustical emissions of a Siemens wind turbine of the type 2.3 MW Mk II*, Annex 4.3, September 2005. Clipper; Clipper Wind via email dated July 30, 2008.

RSE sound level model estimates are based on the maximum sound power level specification provided by Siemens plus uncertainty factors for wind turbine sound power and outdoor propagation.

Using the sound prediction model, sound level contours for operation of the proposed wind project were calculated for the entire study area and are presented in Figure 5-2S. Sound level contours of 55 dBA and 45 dBA are highlighted to correspond to DEP quiet daytime and nighttime limits respectively. The 35 dBA contour is also highlighted and shows how sound propagation differs over water when compared to over land. From these contours, the expected sound levels from 100% of full-rated sound power level (L_{WA}) can be determined for any point within the study area. This range of operations produces the maximum sound power levels emitted by the wind turbines. Selected positions representing the nearest protected locations to the turbines are shown on Figures 3-1S and 5-4S. Calculated sound levels at the selected protected locations are indicated on these figures.

Table 5-2S shows distances of protected locations from the nearest proposed wind turbine and compares estimated sound levels with the most stringent DEP nighttime sound level limits applicable to each position.

Sound levels from wind turbine operation are presented for nine residential receiver points (PL1 to PL9) in the vicinity of the proposed wind project. Selected points represent nearby protected locations where the most stringent DEP nighttime limits apply and other points of local interest (e.g. PL8 and PL9). These positions represent protected locations closest to the wind turbines in various directions where sound levels are the highest and have the greatest potential to exceed DEP limits. Landowner agreements are expected at protected locations closer to the wind turbines than the nearest receiver points (see Figures 3-1S and 5-4S). Under these agreements no sound level limits will apply at these properties (ref. DEP 375.10, Section C 5.s).

Sound level attenuation from the wind turbines was calculated by the acoustic model in accordance with ISO 9613-2. ISO 9613-2 is an international standard commonly used for predicting sound level attenuation from a noise source for a moderate downwind condition in all directions. Attenuation is calculated for distance, atmospheric absorption and intervening terrain. Conservative factors were applied for ground absorption assuming a mix of hard and soft ground. The surfaces of nearby lakes were specifically mapped and lake surfaces were assigned no ground absorption as appropriate for a hard, reflective surface. The model calculations exclude attenuation from foliage, which has the potential to reduce sound levels.

TABLE 5-2S
ESTIMATED (Modeled) SOUND LEVELS FROM WIND TURBINE OPERATION

Residential Receiver Position	Distance to Nearest Wind Turbine, Feet	Estimated Hourly Sound Level, L_{Aeq-Hr}		DEP Nighttime Limit, dBA	Difference between WTG Estimated Hourly Sound Level and DEP Nighttime Limit (dBA)	
		Siemens MK II	Clipper C96		Siemens MK II	Clipper C96
PL1	6,000	35	36	55	-20	-19
PL2	6,800	38	39	55	-17	-16
PL3	2,800	43	44	55	-12	-11
PL4	3,100	40	41	45	-15	-14
PL5	3,100	40	43	45	-5	-2
PL6	3,500	43	45	55	-12	-10
PL7	8,100	37	37	45	-8	-8
PL8	11,500	37	37	45	-8	-8
PL9	11,000	34	33	45	-11	-12

The results presented in Figure 5-2S and Table 5-2S indicate that sound levels at full sound power production of the wind project will be from 5 to 11 dBA below the most stringent DEP nighttime sound level limit of 45 dBA hourly equivalent sound level at the closest protected locations. Figure 5-2S and Table 5-2S also indicate that sound levels at full sound power production of the wind project will be from 12 to 20 dBA below the DEP 55 dBA hourly equivalent nighttime limit applicable at over 500 feet from a residence. For comparison to the Siemens Mk II, predicted sound levels from the Clipper C96 are shown in separate columns in Table 5-2S.

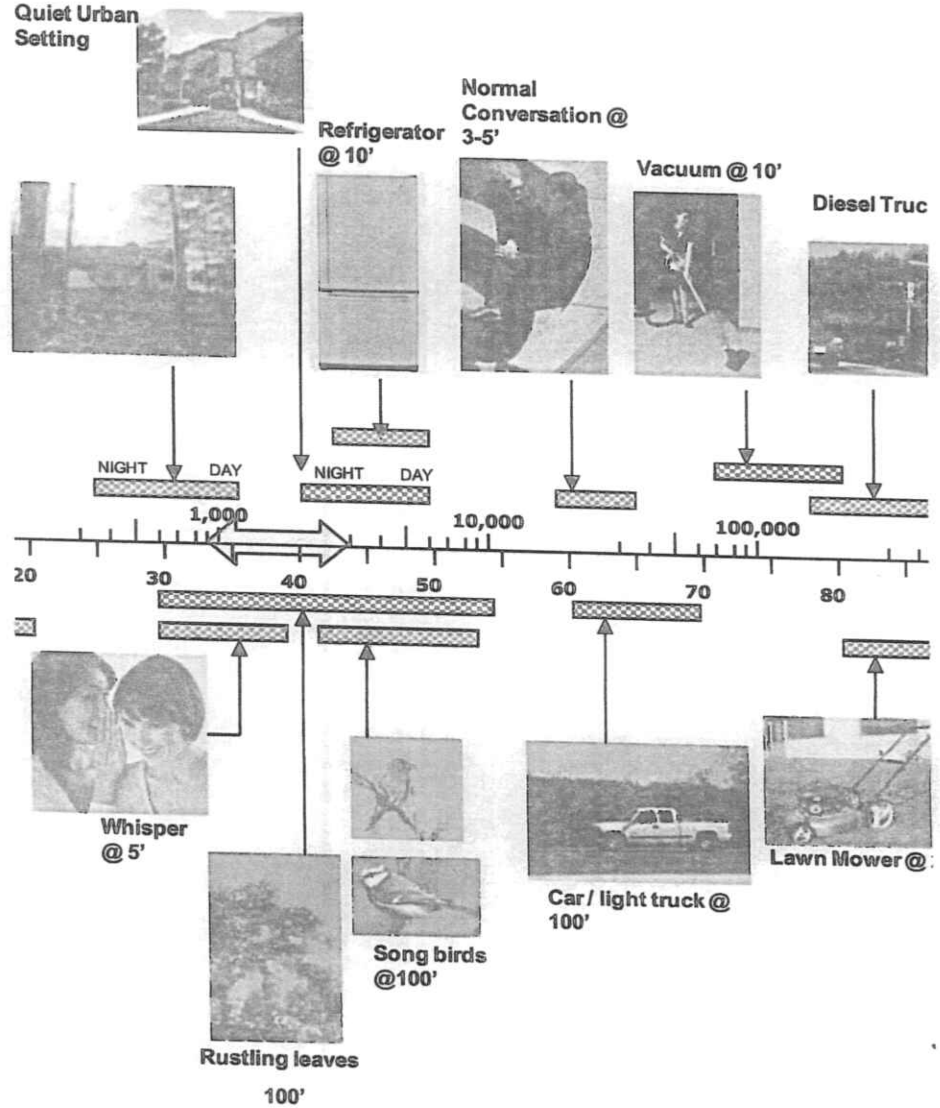
There are large fluctuations in wind speed from the hub height of the wind turbines at 262 feet to the regulated height of four to five feet above ground level. This can be a significant factor in sound emissions and outdoor propagation from the wind project. The quietest periods of the day or night generally occur when surface winds are light or calm. In addition, as the wind speed incident on a wind turbine drops, sound levels from the turbine are reduced.

Variations in wind speed with elevation (wind gradient) may result in very different wind speeds near the surface and tree tops than at turbine/rotor heights. In addition, there may be areas near the ground that are shielded from winds from certain directions. For example, with the general ridge line direction running north-south, lower land to the east would be protected from a westerly wind. Under these conditions, high winds may be present near the top and to the west of the wind turbines, but winds may be relatively calm just east of the ridgeline. However, dwellings are located well east of the ridgeline where shielding from wind would be less. Consequently, the degree of masking by wind-induced ambient sound will fluctuate depending on the wind speed, direction, and location.

Figure 5-3S presents the range of estimated RHW sounds in relation to typical sounds. Figure 5-3S shows that RHW sounds are expected to be at the low end of typical sound levels and comparable to a quiet rural setting, whispering, song birds and the low end of rustling leaves.

Figure 5-3S
RHW and Typical Sound Levels

34 to 43 dBA Range of Modeled RHW Wind Project



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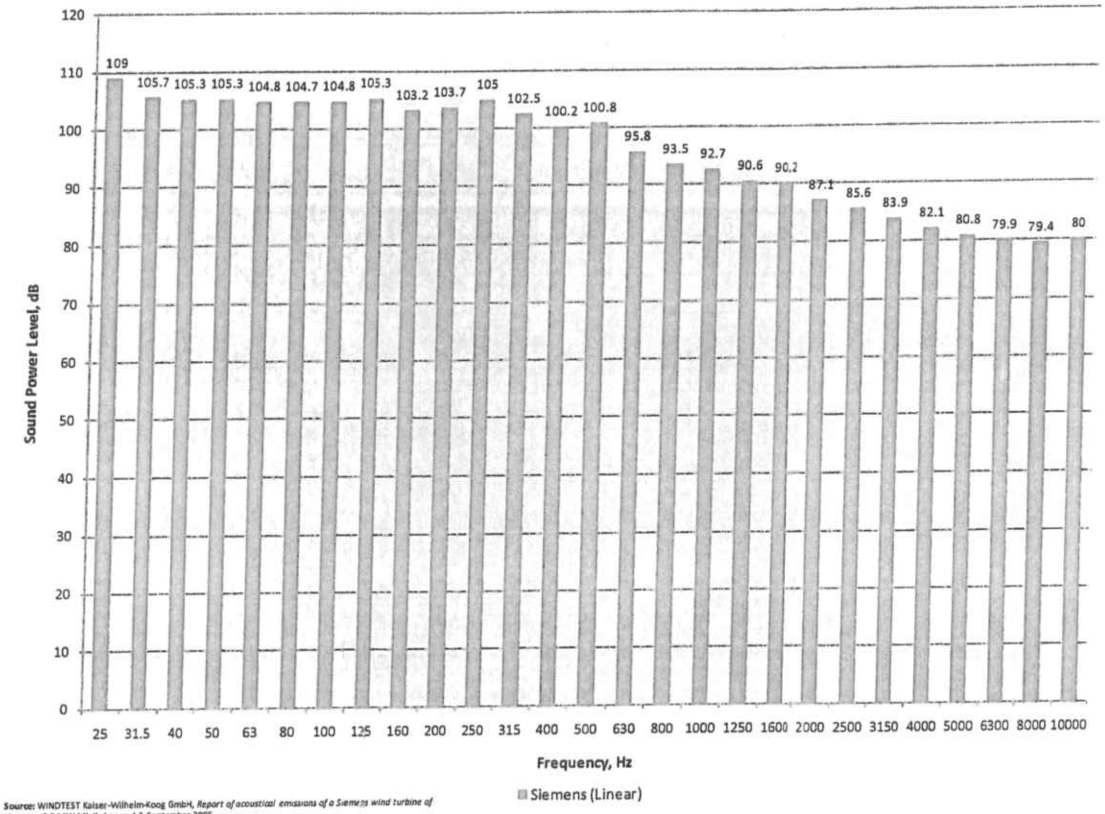
5.4 Tonal and Short Duration Repetitive Sound

A regulated tonal sound occurs when the sound level in a one-third octave band exceeds the arithmetic average of the sound levels in the two adjacent one-third octave bands by a specified dB amount based on octave center frequencies (ref. DEP 375.10.G.24). Siemens 2.3 MW Mk II turbine performance specifications shown in Table 5-1S and were analyzed for potential to generate regulated tonal sounds. A-weighted, one-third-octave band sound power level specification data were converted to the linear scale and are presented in Figure 5-4S. Based on the Siemens 2.3 MW Mk II specifications the DEP tonal thresholds are not likely to be exceeded. Therefore, the Siemens 2.3 MW Mk II wind turbines are not expected to generate regulated tonal sounds as set forth in DEP 375.10.

Figure 5-4S. Siemens 2.3 MW Mk II A-weighted one-third octave band sound power level converted to the linear scale.



Source: WINDTEST Kaiser-Wilhelm-Koog GmbH, *Report of acoustical emissions of a Siemens wind turbine of the type 2.3 MW Mk II*, Annex 4.3, September 2005

Short duration repetitive (SDR) sounds are a sequence of sound events each clearly discernible that causes an increase of 6 dBA or more in the sound level observed before and after the event. SDR sound events are typically less than 10 seconds in duration and occur more than once within an hour. Large wind turbines typically produce a "swish-swish -thump" sound that can vary in amplitude thereby becoming more audible. Published studies of noise from wind turbine operations indicate that amplitude modulated sound levels in the dominant audible range can fluctuate over brief periods as noted by the passage of wind turbine blades and typically range from 2 to 4 dBA.[1] G. P. van den Berg reports that with coherence and synchronicity, amplitude modulation can up to 9± dBA and occurs as a function of the blade passage frequency or RPMs of the WTG. [2] Measurements of amplitude modulation from actual operations of Siemens 2.3 MW Mk II wind turbines have not been provided by the manufacturer. Therefore, RHW operations have the potential to result in the 6 dBA increase required to be SDR sounds as set forth in DEP 375.10. If SDR sounds actually

[1] ETSU-R-97, The Assessment and Rating of Noise from Wind Farms, 1996.

[2] Van den Berg, G.P., The Sounds of High Winds, 2006.

occur from routine operations, RSE does not expect them to cause an exceedence of the applicable DEP limits. Based on the referenced literature, amplitude modulation from large utility grade wind turbine generators has the potential to exceed 6 dBA.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The primary objectives of the Sound Level Assessment were to determine applicable sound level limits at protected locations and lot lines, estimate future sound levels from the proposed wind power project, and evaluate compliance with applicable sound level limits. Existing land uses were identified using a combination of site maps, aerial images, and field observations. Sound level estimates of future wind turbine operations were calculated using a terrain-based acoustic model.

Sound level limits were applied per DEP 375.10 based on land use mapping and landowner agreements. To be conservative with this sound level assessment, quiet limits of 45 dBA nighttime and 55 dBA daytime were utilized per DEP regulations.

The results of this assessment indicate that sound levels from wind turbines are not expected to exceed DEP sound level limits during construction or routine operations. Specifically, model estimates show that sound levels from the wind project will be below the DEP nighttime limit of 45 dBA within 500 feet of any dwelling and at all protected locations.

Once construction and startup of the wind project are complete, RSE recommends monitoring sound levels during routine operations to verify sound level compliance with relevant DEP sound level limits. Measurements using a rigorous protocol with very specific meteorological conditions will demonstrate compliance with DEP noise limits when the wind turbines are operating at full sound power and there is little or no masking from extraneous sources such as wind in the trees, birds, insects, river or stream flowage and traffic. Measurements of tonal and short duration repetitive sounds will be included in the Compliance measurement protocol. Appendix S-1 presents a draft of the Compliance measurement protocol proposed for Record Hill Wind.

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