



MassDEP Daytime and Nighttime BWP AQ Sound Forms

**South Coast Renewables, LLC
New Bedford, Massachusetts**

Prepared for:

**South Coast Renewables, LLC
(FKA: Parallel Products of New England, Inc.)
100 Duchaine Boulevard
New Bedford, Massachusetts 02745**

Prepared by:



**Epsilon Associates, Inc.
3 Mill & Main Place, Suite 250
Maynard, MA 01754**

February 12, 2024



Massachusetts Department of Environmental Protection
Bureau of Waste Prevention – Air Quality

BWP AQ Sound

Transmittal Number _____

Submit alone and/or with Form CPA-FUEL and/or CPA-PPROCESS whenever the construction or alteration of stationary equipment (e.g. electrical generating equipment, motors, fans, process handling equipment or similar sources of sound) has the potential to cause noise, or in response to a MassDEP enforcement action citing noise as a condition of air pollution.

Facility ID (if known) _____

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Introduction

When proposing sound suppression/mitigation measures, similar to the traditional "top-down" BACT process, the "top case" sound suppression/mitigation measures which deliver the lowest sound level increase above background are required to be implemented, unless these measures can be eliminated based upon technological or economic infeasibility. An applicant cannot "model out" of the use of the "top case" sound suppression/mitigation measures by simply demonstrating that predicted sound levels at the property line when employing a less stringent sound suppression/mitigation strategy will result in a sound level increase of less than or equal to the 10 dBA (decibel, A –Weighted) above background sound level increase criteria contained in the MassDEP Noise Policy. A 10 dBA increase is the maximum increase allowed by MassDEP; it is not the sound level increase upon which the design of sound suppression/mitigation strategies and techniques should be based. Also, take into consideration that the city or town that the project is located in may have a noise ordinance (or similar) that may be more stringent than the criteria in the MassDEP Noise Policy

A. Sound Emission Sources & Abatement Equipment/Mitigation Measures

1. Provide a description of the source(s) of sound emissions and associated sound abatement equipment and/or mitigation measures. Also include details of sound emission mitigation measures to be taken during construction activities.

Sound sources are described in Section 7.0 of the Sound Level Assessment Report dated February 12, 2024. Mitigation measures are described in Section 7.0 and Section 11.0.

Construction mitigation will include: working only during daytime hours and ensuring that all equipment is in good working order and fitted with mufflers and enclosed engine compartments.

B. Manufacturer’s Sound Emission Profiles & Sound Abatement Equipment

Please attach to this form the manufacturer's sound generation data for the equipment being proposed for installation, or the existing equipment as applicable. This data must specify the sound pressure levels for a complete 360° circumference of the equipment and at given distance from the equipment. Also attach information provided by the sound abatement manufacturer detailing the expected sound suppression to be provided by the proposed sound suppression equipment.

Included as Appendix A of the Sound Level Assessment Report

C. Plot Plan

Provide a plot plan and aerial photo(s) (e.g. GIS) that defines: the specific location of the proposed or existing source(s) of sound emissions; the distances from the source(s) to the property lines; the location, distances and use of all inhabited buildings (residences, commercial, industrial, etc) beyond the property lines; identify any areas of possible future construction beyond the property line; and sound monitoring locations used to assess noise impact on the surrounding community. All information provided in the sound survey shall contain sufficient data and detail to adequately assess any sound impacts to the surrounding community, including elevated receptors as applicable, not necessarily receptors immediately outside the facility's property line.

Included as Figure 7-1 of the Sound Level Assessment Report

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D. Community Sound Level Criteria

Approval of the proposed new equipment or proposed corrective measures will **not** be granted if the installation:

1. Increases off-site broadband sound levels by more than 10 dBA above “ambient” sound levels. Ambient is defined as the lowest one-hour background A-weighted sound pressure level that is exceeded 90 percent of the time measured during equipment operating hours. Ambient may also be established by other means with the consent of MassDEP.
2. Produces off-site a "pure tone" condition. “Pure tone” is defined as when any octave band center frequency sound pressure level exceeds the two adjacent frequency sound pressure levels by 3 decibels or more.
3. Creates a potential condition of air pollution as defined in 310 CMR 7.01 and the MassDEP Noise Policy.

Note: These criteria are measured both at the property line and at the nearest inhabited building.

For equipment that operates, or will be operated intermittently, the ambient or background noise measurements shall be performed during the hours that the equipment will operate and at the quietest times of the day. The quietest time of the day is usually between 1:00 a.m. and 4:00 a.m. on weekend nights. The nighttime sound measurements must be conducted at a time that represents the lowest ambient sound level expected during all seasons of the year.

For equipment that operates, or will operate, continuously and is a significant source of sound, such as a proposed power plant, background shall be established via a minimum of seven consecutive days of continuous monitoring at multiple locations with the dBA L 90 data and pure tone data reduced to one-hour averages.

In any case, consult with the appropriate MassDEP Regional Office before commencing noise monitoring in order to establish a sound monitoring protocol that will be acceptable to MassDEP.

E. Full Octave Band Analysis

The following community sound profiles will require the use of sound pressure level measuring equipment in the neighborhood of the installation. An ANSI S1.4 Type 1 sound monitor or equivalent shall be used for all sound measurements. A detailed description of sound monitor calibration methodology shall be included with any sound survey.

1. Lowest **ambient** sound pressure levels during operating hours of the equipment.
 - a. At property line:

A-Weighted	31.5	63.0	125	250	500	1K	2K	4K	8K	16K
39	49	46	42	38	35	36	27	13	11	12
39	47	45	40	38	35	36	28	15	11	12
36	49	47	42	35	32	32	27	18	12	12
33	48	44	39	34	30	28	18	12	11	13
37	52	49	42	34	34	32	24	15	12	12



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E. Full Octave Band Analysis (continued)

b. At the nearest inhabited building and if applicable at buildings at higher elevation:

A- Weighted	31.5	63.0	125	250	500	1K	2K	4K	8K	16K

2. Neighborhood sound pressure levels with source operating without sound abatement equipment.

a. At property line:

A- Weighted	31.5	63.0	125	250	500	1K	2K	4K	8K	16K

b. At the nearest inhabited building and if applicable at buildings at higher elevation:

A- Weighted	31.5	63.0	125	250	500	1K	2K	4K	8K	16K

Note: You are required to complete sound profiles 2a and 2b only if you are submitting this form in response to a MassDEP enforcement action citing a noise nuisance condition. If this is an application for new equipment, Skip to 3.

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E. Full Octave Band Analysis (continued)

3. **Expected** neighborhood sound pressure levels after installation of sound abatement equipment.

a. At property line:

A- Weighted	31.5	63.0	125	250	500	1K	2K	4K	8K	16K
40	53	51	44	39	36	37	29	15	11	NA
40	53	52	45	39	35	36	28	16	11	NA
45	54	53	48	44	41	41	34	25	12	NA
43	55	54	46	42	39	40	31	21	11	NA
39	55	54	45	38	35	34	25	16	12	NA

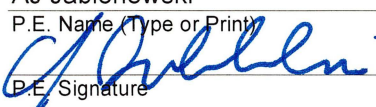
b. At nearest inhabited building and if applicable at buildings at higher elevations:

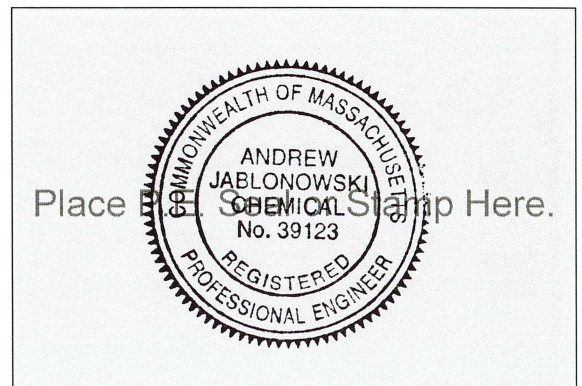
A- Weighted	31.5	63.0	125	250	500	1K	2K	4K	8K	16K
37	53	50	45	36	32	33	27	19	12	NA

Note: MassDEP may request that actual measurements be taken after the installation of the noise abatement equipment to verify compliance at all off-site locations.

F. Professional Engineers Stamp

The seal or stamp and signature of a Massachusetts Registered Professional Engineer (P.E.) must be entered below. Both the seal or stamp impression and the P.E. signature must be original. This is to certify that the information contained in this Form has been checked for accuracy, and that the design represents good air pollution control engineering practice.

AJ Jablonowski
P.E. Name (Type or Print)

P.E. Signature
Principal
Position/Title
Epsilon Associates Inc.
Company
February 12, 2024
Date (MM/DD/YYYY)
39123
P.E. Number





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G. Certification by Responsible Official

The signature below provides the affirmative demonstration pursuant to 310 CMR 7.02(5)(c)8 that any facility(ies) in Massachusetts, owned or operated by the proponent for this project (or by an entity controlling, controlled by or under common control with such proponent) that is subject to 310 CMR 7.00, et seq., is in compliance with, or on a MassDEP approved compliance schedule to meet, all provisions of 310 CMR 7.00, et seq., and any plan approval, order, notice of noncompliance or permit issued thereunder. This Form must be signed by a Responsible Official working at the location of the proposed new or modified facility. Even if an agent has been designated to fill out this Form, the Responsible Official must sign it. (Refer to the definition given in 310 CMR 7.00.)

I certify that I have personally examined the foregoing and am familiar with the information contained in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment.

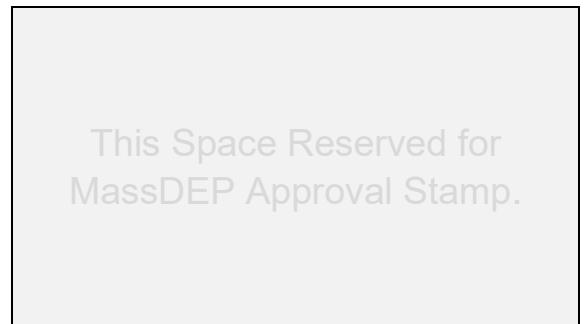
Responsible Official Name (Type or Print)

Responsible Official Signature

Responsible Official Title

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33	46	45	39	33	28	28	24	17	12	12
31	43	39	36	33	28	24	16	12	12	13
33	46	48	39	32	31	27	19	14	12	12



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E. Full Octave Band Analysis (continued)

b. At the nearest inhabited building and if applicable at buildings at higher elevation:

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2. Neighborhood sound pressure levels with source operating without sound abatement equipment.

a. At property line:

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38	60	59	44	37	32	29	24	17	16	NA
37	60	60	41	36	30	26	17	12	12	NA
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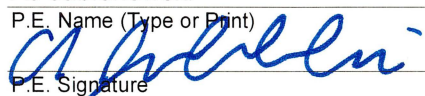
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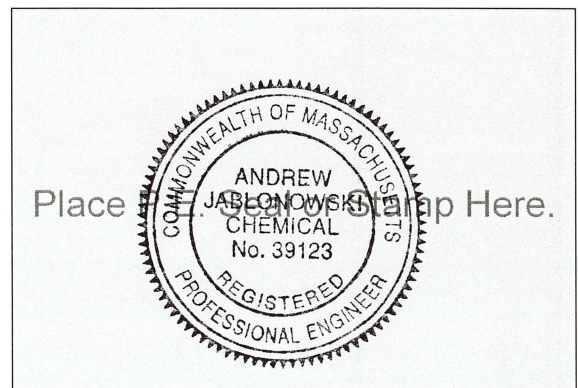
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AJ Jablonowski
P.E. Name (Type or Print)

P.E. Signature
Principal
Position/Title
Epsilon Associates Inc
Company
February 12, 2024
Date (MM/DD/YYYY)
39123
P.E. Number





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Responsible Official Name (Type or Print)

Responsible Official Signature

Responsible Official Title

Responsible Official Company/Organization Name

Date (MM/DD/YYYY)

