



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

DEVAL L. PATRICK  
Governor

TIMOTHY P. MURRAY  
Lieutenant Governor

RICHARD K. SULLIVAN JR.  
Secretary

KENNETH L. KIMMELL  
Commissioner

June 26, 2012

Mr. Peter Frey, Plant Manager  
Dartmouth Power Associates, L.P.  
One Energy Road  
Dartmouth, Massachusetts 02747

RE: **PLAN APPROVAL**  
**Sound Level Compliance Demonstration**  
310 CMR 7.02: Plan Approval and Emission Limitations  
Transmittal No.: W113943  
Application No.: 4B07004  
Facility No.: 205295

AT: Dartmouth Power Associates, L.P.  
One Energy Road  
Dartmouth, Massachusetts 02747

Dear Mr. Frey:

The Department of Environmental Protection (the “Department” or “MassDEP”), Southeast Regional Office (SERO), Bureau of Waste Prevention, has reviewed sound level compliance testing reports and progress updates submitted by EBI Consulting dated April 16, 2010 and August 9, 2010 and by AMEC Earth and Environmental, Inc. dated January 31, 2011, March 25, 2011, April 28, 2011, June 2, 2011, July 26, 2011 and June 11, 2012 for the Dartmouth Power Associates, Inc. facility. The reports and updates were submitted in response to Section X. Noise, Condition 4, of the May 7, 2008 Conditional Approval issued by the Department to Dartmouth Power Associates, L.P. (“DPA” or “the Applicant”) modifying the existing combined cycle facility with the construction and operation of a single, dual fuel (natural gas and ULSD), General Electric LM2500PE, 24.7 MW, simple-cycle combustion turbine to provide peak electrical load service to the grid.

The sound level compliance reports including the identification of post construction mitigation measures were submitted in accordance with Section 7.02 Plan Approval and Emission Limitations as contained in 310 CMR 7.00 “Air Pollution Control Regulations,” adopted by the Department pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-M. The Department’s review has been limited to compliance with applicable Air Pollution Control Regulations

pertaining to sound and does not relieve you of the obligation to comply with all other permitting requirements contained in other regulations or statutes.

Review of the information submitted reveals that DPA has completed post-construction sound emission mitigation, specifically the installation of variable frequency drives for the tempering air fans on the peaking turbine, and has demonstrated through sound level compliance testing that the DPA facility sound level impacts are in compliance with 310 CMR 7.10 Noise of the Massachusetts Air Pollution Control Regulations. The Department hereby APPROVES the operation of the DPA facility subject to the following revised Section X. NOISE provisions. Section X. of the May 7, 2008 Conditional Approval is superseded in its entirety. The below revised Section X. addresses: the additional mitigation measures employed and adjustments to Location 1 and Location 5 allowable noise impacts.

## **X. NOISE**

The applicant has proposed to comply with the "Town of Dartmouth Special Limit for Plant Contribution" as approved in application No. 4B90045 with the exception of Location 1 and Location 5. This limit will include the existing plant equipment as well as the new equipment. For the purposes of this approval, the original ambient noise impact assessment was reviewed with a focus on any new receptors. Using the most recent aerial photographs, the receptors used in the application for the existing facility appear to conservatively represent any new residential construction that has taken place and compliance with the modified Table 3 will ensure that compliance with the Department's Noise Policy will be maintained. Based on the post-construction sound emission mitigation and the submitted Environmental Sound – Compliance Testing Results, dated 7/15/2011, the applicant has demonstrated compliance with the Department's Noise Policy.

1. The Applicant shall take necessary precautions to insure that the facility complies with the Department's noise regulation and policy and that the facility does not cause a condition of air pollution.
2. Department Noise Policy 90-001 limits increases over the existing  $L_{90}$  background level to 10 dB(A). Additionally, "pure tone" sounds, defined as any octave band level that exceeds the levels in adjacent octave bands by 3 dB(A) or more, are also prohibited. The Applicant, at a minimum, shall ensure that the proposed facility complies with said Policy.
3. The allowable noise levels generated from the operation of the Project by the Applicant are summarized in Table 3 of this Conditional Approval. Further, based on the noise frequency distribution, no combination of noise sources shall result in a "pure tone condition," as previously defined.

Table 3: Allowable Noise Impacts				
Location	Lowest Residual Noise Level <sup>1</sup> [dB(A)]	4B90045 approved Facility Plus Ambient Noise Level [dB(A)]	Modified 4B07004 allowable Facility Plus Ambient Noise Level [dB(A)]	Increase over Lowest Residual [dB(A)]
<b>Location 1</b> Snack Shack	32	35	36	4
<b>Location 2</b> Access Road	30	35	35	5
<b>Location 3</b> Residence, NW	29	32	32	3
<b>Location 4</b> Transmission Line	31	33	33	2
<b>Location 5</b> Vacant Land, East	30	35	39	9
<b>Location 6</b> Residence, NE	30	35	35	5
<b>Location 7</b> Near Energy Road	30	36	36	6
<b>Location 8</b> SW Corner, Parcel 67-14	29	35	35	6
<b>Location 9</b> NE Corner, Parcel 62-22	31	34	34	3

**Table 3 Notes:**

1. The lowest background sound levels (one hour) observed where the noise level is exceeded 90 percent of the time (L<sub>90</sub>), which is the level regulated by the Massachusetts DEP Noise Policy.
4. As demonstrated by the referenced submittals, the Applicant has conducted a noise survey in accordance with Department procedures/guidelines to verify compliance with the allowable noise impacts specified in Table 3 of this Approval. For the purposes of any future sound compliance demonstration, sources of noise surveyed shall include, but are not limited to: combustion turbine exhaust (exhaust silencer), turbine air intake, SCR structure, turbine enclosure, generator enclosure, turbine ventilation exhaust, auxiliary skid enclosure, water injection skid enclosure, generator ventilation exhaust, intake silencer, turbine ventilation fan and motor, generator ventilation fan and motor, and transformers.

## APPEAL PROCESS

This Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Approval. Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. Additionally, the request must state why the Plan Approval is not consistent with the applicable laws and regulations.

The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:

Commonwealth of Massachusetts  
 Department of Environmental Protection  
 P.O. Box 4062  
 Boston, Massachusetts 02211

The request will be dismissed if the filing fee is not paid unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

MassDEP may waive the adjudicatory hearing-filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Please be advised that this Approval does not negate the responsibility of DPA to comply with this or any other applicable federal, state, or local regulations now or in the future. Nor does this Approval imply compliance with any other applicable federal, state, or local regulation now or in the future.

Should you have any questions concerning this matter, please contact Peter Russell at (508) 946-2821.

Sincerely,

*This final document copy is being provided to you electronically by the  
Department of Environmental Protection. A signed copy of this document  
is on file at the DEP office listed on the letterhead.*

John K. Winkler, Permit Chief  
Bureau of Waste Prevention

ecc: Steven Babcock, P.E., AMEC E&E, Inc.  
Mark Driscoll, Sapphire Power Holdings, LLC  
Tim Fagan, Sapphire Power Holdings, LLC  
Mike Armstrong, Sapphire Power Holdings, LLC  
Doug Bell, Cavanaugh Tocci Associates, Inc.  
Board of Health, Dartmouth, MA  
Yi Tian, MassDEP/BWP-Boston  
Maria Pinaud, MassDEP/BWP-SERO  
Peter Russell, MassDEP/BWP-SERO  
Laura Black, MassDEP/BWP-SERO