



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

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Commissioner

## FINAL AIR QUALITY OPERATING PERMIT

Issued by the Massachusetts Department of Environmental Protection ("MassDEP") pursuant to its authority under M.G.L. c. 111, §142B and §142D, 310 CMR 7.00 et seq., and in accordance with the provisions of 310 CMR 7.00: Appendix C.

**ISSUED TO ["the Permittee"]:**

Nantucket Electric Company  
2 Windy Way #374  
Nantucket, MA 02554

**FACILITY LOCATION:**

Nantucket Electric Company  
Bunker Road  
Nantucket, MA 02554

**NATURE OF BUSINESS:**

Electric Power Generation

**RESPONSIBLE OFFICIAL:**

Name: Mr. David Fredericks  
Title: Vice President of Operations

**This operating permit shall expire on 10/16/2014.**

For the Department of Environmental Protection, Bureau of Waste Prevention

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.

\_\_\_\_\_  
Permit Chief, Bureau of Waste Prevention

**INFORMATION RELIED UPON:**

Renewal Application No. 4V08010  
Transmittal No. W210644

**FACILITY IDENTIFYING NUMBERS:**

AQ ID: 1200284  
FMF FAC NO. 131041  
FMF RO NO. 54428

**STANDARD INDUSTRIAL CODE (SIC):**

4911

**NORTH AMERICAN INDUSTRIAL  
CODE (NAICS): 221112**

**FACILITY CONTACT PERSON:**

Name: Mr. Steven J. Holdgate  
Title: Operation Coordinator  
Phone: (508) 325-8223  
Fax: (508) 325-8100  
Email: [steven.holdgate@us.ngrid.com](mailto:steven.holdgate@us.ngrid.com)

\_\_\_\_\_  
Date: 10/16/09

This information is available in alternate format. Call Donald M. Gomes, ADA Coordinator at 617-556-1057. TDD# 866-539-7622 or 617-574-6868.

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## **SPECIAL CONDITIONS FOR OPERATING PERMIT**

A Legend to Abbreviated Terms found in the following Tables is located in Section 28 of the Operating Permit.

### **1. PERMITTED ACTIVITIES**

In accordance with the provisions of 310 CMR 7.00:Appendix C and applicable rules and regulations, the Permittee is authorized to operate air emission units as shown in Table 1 and exempt, and insignificant activities as described in 310 CMR 7.00:Appendix C(5)(h) and (i). The units described in Table 1 are subject to the terms and conditions shown in Sections 4, 5, and 6 and to other terms and conditions as specified in this permit. Emissions from the exempt activities shall be included in the total facility emissions for the emission-based portion of the fee calculation described in 310 CMR 4.00 and this permit.

### **DESCRIPTION OF FACILITY AND OPERATIONS**

The Nantucket Electric Company's Bunker Road facility ("NEC"), is located on the island of Nantucket in Massachusetts. It is a fossil fuel electric power generation facility, used for backup power to the two existing submarine cables which receive power from the mainland.

This backup power is comprised of (2) Solar combustion turbine generator sets which can also be used to generate peaking power. Both emission units burn No. 2 fuel oil only.

See Section 4, Tables 3, 4, 5 and 6 for fuel, pollutants' emission limits/standards, applicable regulations/approvals, monitoring/testing, record keeping and reporting. Also in Section 4, Table 7 lists requirements that the permittee is currently not subject to.

**2. EMISSION UNIT IDENTIFICATION**

The following emission units (Table 1) are subject to and regulated by this operating permit:

<b>Table 1</b>			
<b>Emission Unit (EU)</b>	<b>Description of Emission Unit</b>	<b>EU Design Capacity</b>	<b>Pollution Control Device (PCD)</b>
EU12	Unit 12: Solar Model # Centaur H Combustion Turbine	56.2 MMBtu per hour 3779 KW <sup>1</sup>	None
EU13	Unit 13: Solar Model # Centaur H Combustion Turbine	56.2 MMBtu per hour 3779 KW <sup>1</sup>	None

**Table 1 Footnote:**

1. Unit No. 12 and Unit No. 13 Maximum Energy Output Rating is based on ISO conditions.

**Table 1 Key to terms:**

MMBtu = Fuel heat input in million British Thermal Units  
 KW = Electrical output in Kilowatts

**3. IDENTIFICATION OF EXEMPT ACTIVITIES**

The following are considered exempt activities in accordance with the criteria contained in 310 CMR 7.00: Appendix C(5)(h):

<b>Table 2</b>	
<b>Description of Current Exempt Activities</b>	<b>Reason</b>
The list of current exempt activities is contained in the Operating Permit application and shall be updated by the Permittee to reflect changes at the facility over the permit term. An up-to-date copy of exempt activities list shall be kept on-site at the facility and a copy shall be submitted to the MassDEP's Regional Office. Emissions from these activities shall be reported on the annual emissions statement pursuant to 310 CMR 7.12.	310 CMR 7.00:Appendix C(5)(h)

## **4. APPLICABLE REQUIREMENTS**

### **A. EMISSION LIMITS AND RESTRICTIONS**

The permittee is subject to the emission limits/restrictions as contained in Table 3 below:

<b>Table 3</b>				
<b>Emission Unit (EU)</b>	<b>Fuel</b>	<b>Pollutant</b>	<b>Emission Limit/Standard<sup>6</sup></b>	<b>Applicable Regulations and/or Approval No.</b>
EU12, EU13	No. 2 Fuel Oil	NO <sub>x</sub>	45.3 lbs/hr <sup>3</sup> 0.805 lbs/MMBTU	4B93109 Table II.
			100 ppmvd at 15% O <sub>2</sub>	4B02025 Section II., 310 CMR 7.19(7) and 310 CMR 7.00: Appendix B(3)
			See "Special Terms and Conditions", Section 5.5	
			0.0207% by volume at 15% O <sub>2</sub>	4B93109 Condition 6.B. and 40 CFR 60.332
			102.0 tons/12-month rolling period <sup>1</sup>	4B98043 Table C.
		CO <sup>4</sup>	7.3 lbs/hr 0.237 lbs/MMBTU	4V95062 and 310 CMR 7.19(7)
			100 ppmvd at 15% O <sub>2</sub>	4B02025 Section II. and 310 CMR 7.19(7)
			16.5 tons/12-month rolling period <sup>1</sup>	4B98043 Table C.
		UHC <sup>4</sup>	1.62 lbs/hr 0.053 lbs/MMBTU	4B93109 Table II.
			3.5 tons/12-month rolling period <sup>1</sup>	4B98043 Table C.
		PM	5.62 lbs/hr <sup>3</sup> 0.1 lbs/MMBTU	4B93109 Table II.
			12.5 tons/12-month rolling period <sup>1</sup>	4B98043 Table C.
		SO <sub>2</sub>	19.1 lbs/hr <sup>3</sup> 0.34 lbs/MMBTU	4B93109 Table II.
			43.0 tons/12-month rolling period <sup>1</sup>	4B98043 Table C.
		Sulfur Content	0.17 lbs/MMBTU	4B93109 Condition 6.H. and 310 CMR 7.05(1)(a)2
0.8% by weight <sup>5</sup>	40 CFR 60 Subpart GG			
Nitrogen content	0.08% by weight	4B93109 Condition 6.I.		
Facility Wide	No. 2 Fuel Oil	Opacity	≤ 20%, except > 20% to ≤ 40% for ≤ two minutes during any one hour.	310 CMR 7.06(1)(b)
		Smoke	< No. 1 of Chart <sup>2</sup> , except ≥ No. 1 to < No. 2 of Chart for ≤ 6 minutes during any one hour	310 CMR 7.06(1)(a)

**Table 3 Footnotes:**

1. In accordance with Approval No. 4B98043 Table C., Potential Emissions are based on each unit operating at its maximum allowable energy input restriction per 12 month rolling period. These are identified in “Special Terms and Conditions”, Section 5.4., ENERGY INPUT RESTRICTIONS TABLE.
2. Chart means the Ringlemann Scale for grading density of smoke, as published by the U.S. Bureau of Mines and referred to as Information Circular No. 8333, or any smoke inspection guide approved by the Department.
3. For Unit No. 12 and Unit No. 13, (lbs/hr) is based on the manufacturer’s maximum fuel firing rating of 56.2 MMBtu/hr (HHV) per unit at 0° F.
4. In accordance with Approval No. 4B93109 Table II., for Unit No. 12 and Unit No. 13 the CO and UHC emissions values above, in (lbs/hr) and (lbs/MMBTU), are at 50% load conditions. At 75% and 100% load conditions, CO and UHC emissions are equal to or less than those listed above.
5. By complying with Approval No. 4B93109 Condition 6.H. for Unit No. 12 and Unit No. 13, NEC will be meeting a lower sulfur content limit than is required by 40 CFR 60 Subpart GG. Therefore, this requirement satisfies the conditions in 40 CFR 60 Subpart GG.
6. Emission Limit/Standard column represents the emission limits and standards per each individual Emission Unit.

**Table 3 Key to terms:**

NO<sub>x</sub> = oxides of nitrogen  
CO = carbon monoxide  
UHC = unburned hydrocarbons  
PM = particulate matter  
SO<sub>2</sub> = sulfur dioxide  
lbs/hr = pounds per hour  
lbs/MMBTU = pounds per million Btu  
O<sub>2</sub> = Oxygen  
ppmvd = parts per million by volume, dry basis  
% = percent  
CMR = Code of Massachusetts Regulations  
< = less than  
> = greater than  
≤ = less than or equal to  
≥ = greater than or equal to

**B. COMPLIANCE DEMONSTRATION**

The permittee is subject to the monitoring/testing, recordkeeping, and reporting requirements as contained in Tables 4, 5, and 6 below and 310 CMR 7.00 Appendix C (9) and (10) and applicable requirements contained in Table 3:

<b>Table 4</b>	
<b>Emission Unit (EU)</b>	<b>Monitoring/Testing Requirements</b>
EU12, EU13	<p><b>Monitoring:</b></p> <ol style="list-style-type: none"> <li>1. In accordance with Approval No. 4B93109 Condition 6.A., NEC shall comply with the monitoring requirements as contained in 40 CFR 60, sections 60.7, 60.8 and 60.13.</li> <li>2. In accordance with 310 CMR 7.04(2), a smoke density indicator with alarm shall be installed, maintained and operated.</li> <li>3. NEC shall monitor the sulfur and nitrogen content of No. 2 oil fired in the combustion turbines in accordance with 40 CFR 60 Section 60.334(b)(1).</li> <li>4. In accordance with Approval No. 4B02025 Section IV., NEC shall monitor the NO<sub>x</sub> actual emissions (AcE<sub>NOx</sub>) in pounds per day, the allowable NO<sub>x</sub> emissions (AIE<sub>NOx</sub>) in pounds per day, the quantity of federally enforceable ERCs required to be purchased from sources of NO<sub>x</sub> ERCs certified by the Department under 310 CMR 7.00: Appendix B.</li> </ol> <p><b>Testing:</b></p> <ol style="list-style-type: none"> <li>1. In accordance with Approval No. 4B02025 Section III., pursuant to 310 CMR 7.19(13)(c), NEC shall perform NO<sub>x</sub> RACT annual stack testing to demonstrate compliance with the NO<sub>x</sub> and CO emission rate limitations.</li> </ol>
Facility Wide	<p><b>Monitoring:</b></p> <ol style="list-style-type: none"> <li>1. Monitor operations such that information may be compiled for the annual Source Registration required by 310 CMR 7.12.</li> <li>2. In accordance with 310 CMR 7.05(1)(a)2, NEC shall monitor sulfur content in No. 2 oil for all units.</li> </ol> <p><b>Testing:</b></p> <ol style="list-style-type: none"> <li>1. In accordance with 310 CMR 7.13(1), any person owning, leasing, operating or controlling a facility for which the Department has determined that stack testing is necessary to ascertain compliance with the Department's regulations or design approval provisos shall cause such stack testing:           <ol style="list-style-type: none"> <li>(a) to be conducted by a person knowledgeable in stack testing,</li> <li>(b) to be conducted in accordance with procedures contained in a test protocol which has been approved by the Department,</li> <li>(c) to be conducted in the presence of a representative of the Department when such is deemed necessary, and</li> <li>(d) to be summarized and submitted to the Department with analyses and report within such time as agreed to in the approved test protocol.</li> </ol> </li> </ol> <p>Conduct any other testing or testing methodology if and when requested by the Department or U.S. EPA.</p> <ol style="list-style-type: none"> <li>2. Opacity shall be determined in accordance with EPA Test Method 9, as specified in 40 CFR Part 60, Appendix A, if and when requested by the Department or U.S. EPA. This method shall also apply to any detached plumes.</li> </ol>

**Table 5**

Emission Unit (EU)	Record Keeping Requirements
EU12, EU13	<p>1. In accordance with 310 CMR 7.04(2), NEC must record continuous operation of the smoke density sensing instrument. Such smoke density equipment shall be available for inspection at reasonable times by a representative of the Department, which may include the review of recording charts, which must be retained and made available for a period of one year from the date of use.</p> <p>2. In accordance with Approval No. 4B93109 Condition 6.I., NEC shall maintain records to demonstrate compliance for the Nitrogen content in No. 2 fuel oil.</p> <p>3. In accordance with Approval No. 4B93109 Condition 6.A., NEC shall comply with the recordkeeping requirements as contained in 40 CFR 60, sections 60.7, 60.8 and 60.13.</p> <p>4. In accordance with Approval No. 4B93109 Condition 8., NEC shall maintain separate operation and maintenance logs which shall be made available for review by Department personnel during normal business hours. These logs shall contain the following information:</p> <ul style="list-style-type: none"> <li>a. All data required to track the "Emission Limitations" and "Operating Limitations" contained in Tables I., II. and III. of such approval.</li> <li>b. A record of all maintenance related activities performed on the engine/generator sets and the combustion turbine sets.</li> </ul> <p>5. In accordance with Approval No. 4B02025 Section IV., NEC shall comply with the record keeping requirements contained in the applicable sections of Appendix B(3) and with 310 CMR 7.19 as specified in 310 CMR 7.19(13)(d). All records shall be maintained up-to-date such that year-to-date information is readily available for Department examination. Recordkeeping shall, at a minimum, include compliance records sufficient to demonstrate that emissions have not exceeded what is allowed by Approval No. 4B02025. Calendar month records shall include, but not be limited to: types and amounts of fuel (gal/day) burned per emission unit based on fuel tank readings, actual and allowable NO<sub>x</sub> emission rate (lb/day), and the high heating value of each fuel (HHV Btu/gal).</p> <p>6. In accordance with Approval No. 4B02025 Section IV., NEC shall record the NO<sub>x</sub> actual emissions (AcE<sub>NOx</sub>) in pounds per day, the allowable NO<sub>x</sub> emissions (AIE<sub>NOx</sub>) in pounds per day, the quantity of federally enforceable ERCs required to be purchased from sources of NO<sub>x</sub> ERCs certified by the Department under 310 CMR 7.00: Appendix B.</p> <p>7. In accordance with Approval No. 4B02025 Section IV., based upon annual stack testing, NEC shall determine and record the actual NO<sub>x</sub> emissions. Using the said actual NO<sub>x</sub> emission value and the actual fuel throughput for each unit, the number of ERCs required to maintain each unit at 100 ppmvd NO<sub>x</sub> emission limit at 15% O<sub>2</sub> shall be calculated daily, totaled for each ozone and non-ozone season and recorded. That number of Department certified ERCs will then be multiplied by a factor of 1.25 to determine the total number of ERCs required. Also, records shall be maintained that identify the source of ERCs utilized including company name, emission unit, method of generation, date of generation and date of purchase. At the end of each calendar year, the total number of ERCs used for compliance shall be calculated, as well as a running total of ERCs used for the duration of Approval No. 4B02025.</p>
Facility Wide	<p>1. In accordance with Approval No. 4B98043 Condition C.1., NEC shall maintain records on a monthly basis and on a twelve month rolling period basis (the total from the latest month plus the sum for the eleven months preceding the latest month). These records shall document operating parameters and emissions generated from the facility.</p>

**Table 5**

<b>Emission Unit (EU)</b>	<b>Record Keeping Requirements</b>
Facility Wide (Cont.)	<p>2. In accordance with 310 CMR 7.00: Appendix C(10)(b), NEC shall maintain records of all monitoring data and supporting information on-site for a period of at least five years from the date of the monitoring sample, measurement, report or initial operating permit application. Supporting information includes, at a minimum, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the operating permit, and any other information required to interpret the monitoring data.</p> <p>3. NEC shall maintain records to facilitate compilation of data for the annual Source Registration required by 310 CMR 7.12. Maintain a copy of these forms submitted annually.</p> <p>4. NEC shall maintain the test results of any stack testing performed in accordance with 310 CMR 7.13(1) or of any other testing or testing methodology required by the Department or U.S. EPA.</p> <p>5. In accordance with Approval No. 4V08010, NEC shall maintain a running log of total fuel consumption and data reduced on a monthly basis to document compliance with the energy input restrictions contained in "Special Terms and Conditions", Section 5.8., ENERGY INPUT RESTRICTIONS TABLE.</p> <p>6. In accordance with 310 CMR 7.05(1)(a)2, NEC shall maintain records to demonstrate compliance for the Sulfur content in No. 2 fuel oil.</p>

**Table 6**

Emission Unit (EU)	Reporting Requirements
EU12, EU13	<ol style="list-style-type: none"> <li>1. In accordance with Approval No. 4B93109 Condition 6.A., NEC shall comply with the notification requirements as contained in 40 CFR 60, sections 60.7, 60.8 and 60.13.</li> <li>2. In accordance with Approval No. 4B93109 Condition 6.K., NEC's combustion turbines are subject to 40 CFR 60, Standards of Performance for New Stationary Sources, specific requirements are contained in Subparts A and GG.</li> <li>3. In accordance with 310 CMR 7.19(13)(d)9, NEC shall submit compliance records within ten (10) days of a written request by the Department or U.S. EPA.</li> <li>4. In accordance with Approval No. 4B02025 Section IV., NEC shall comply with the reporting requirements contained in the applicable sections of Appendix B(3) and with 310 CMR 7.19 as specified in 310 CMR 7.19(13)(d).</li> <li>5. In accordance with Approval No. 4B02025 Section V., NEC shall submit quarterly reports as specified in 310 CMR 7.19(13)(d). NEC shall submit this report to the Department's Southeast Regional Office by the 30th day of April, July, October and January of each calendar year. This report shall show the NO<sub>x</sub> actual emissions (AcE NO<sub>x</sub>) in pounds per day, the allowable NO<sub>x</sub> emissions (AIE NO<sub>x</sub>) in pounds per day, and the quantity of federally enforceable NO<sub>x</sub> ERCs required to be purchased from sources of NO<sub>x</sub> ERCs certified by the Department under 310 CMR 7.00: Appendix B. In addition, NEC shall also incorporate certification that the quantity of NO<sub>x</sub> ERCs required to be purchased to meet compliance has been purchased and shall indicate the entity from which the purchase was made and the date upon which the NO<sub>x</sub> ERCs were purchased.</li> <li>6. In accordance with Approval No. 4B02025 Section V., NEC shall submit at the end of each calendar year, a year-end report which includes a summary that identifies each source of ERCs utilized, including company name, emission unit, method of generation, date of generation and date of purchase. In addition, the total number of ERCs used for compliance shall be reported to the Department, as well as a running total of ERCs used for the duration of said Approval.</li> </ol>
Facility Wide	<ol style="list-style-type: none"> <li>1. In accordance with 310 CMR 7.12, submit annually information pertinent to the nature and amounts of emissions on forms provided by the Department, and in addition, ensure that the facility is available for inspection by Department and/or U.S. EPA personnel at any reasonable time.</li> <li>2. In accordance with Approval No. 4B98043 Condition F.7., NEC must notify the Compliance and Enforcement Section Chief for the Bureau of Waste Prevention at this office by telephone, or fax of any upsets or malfunctions to the facility which result in an excess emission to the air and/or a condition of air pollution. Notification must be within three (3) days of said upset or malfunction.</li> <li>3. In accordance with 310 CMR 7.13(1), NEC shall submit Emissions Compliance Testing (Stack Testing) Reports.</li> <li>4. In accordance with 310 CMR 7.00: Appendix C(10)(c), NEC shall report a summary of all monitoring data and related supporting information to the Department at least every six months in a format and time frequency specified by the Department.</li> </ol>

<b>Table 6</b>	
<b>Emission Unit (EU)</b>	<b>Reporting Requirements</b>
Facility Wide (cont.)	5. In accordance with 310 CMR 7.00: Appendix C(10)(f), NEC shall promptly report to the Department all instances of deviations from permit requirements. This report shall include the deviation itself, including those attributable to upset conditions as defined in the permit, the probable cause of the deviation, and any corrective actions or preventive measures taken. (See General Condition No. 25)
	6. In accordance with 310 CMR 7.00: Appendix C(10)(h), NEC must certify all required reports by a responsible official, consistent with 310 CMR 7.00: Appendix C(5)(c).
	7. All NEC's notification and reporting requirements contained herein and in accordance with Section No. 25 of this Operating Permit, shall be sent directly to:  <div style="text-align: center;">           Department of Environmental Protection            Bureau of Waste Prevention            Southeast Regional Office            20 Riverside Drive            Lakeville, MA 02347             ATTN: Permit Section, Chief             Telephone: (508) 946-2770            Fax: (508) 947-6557            (508) 946-2865         </div>

**C. GENERAL APPLICABLE REQUIREMENTS**

The permittee shall comply with all generally applicable requirements contained in 310 CMR 7.00 et. seq. and 310 CMR 8.00 et. seq., when subject.

**D. REQUIREMENTS NOT CURRENTLY APPLICABLE**

The permittee is currently not subject to the following requirements:

<b>Table 7</b>	
<b>Regulation</b>	<b>Description/Reason</b>
310 CMR 7.07	Open Burning
42 USC 7401, §112	Hazardous Air Pollutants
42 USC 7401, §112(r)(7)	Accidental Release Prevention Requirements: Risk Management under the Clean Air Act §112(r)
310 CMR 7.16	Reduction of Single Occupant Commuter Vehicle Use
310 CMR 7.25	Consumer and Commercial Products
40 CFR Part 64	Compliance Assurance Monitoring

**5. SPECIAL TERMS AND CONDITIONS**

The permittee is subject to the following special provisions that are not contained in Tables 3, 4, 5, and 6:

1. The Emission Units shall continue to emit through the stack parameters in Table 8:

<b>Table 8</b>				
<b>Emission Unit (EU)</b>	<b>Stack Number</b>	<b>Stack Height</b>	<b>Stack Exit Diameter</b>	<b>Stack Material</b>
EU 12 & EU 13	12 & 13	40 Feet	40 inches	Stainless Steel

2. In accordance with Approval No. 4B93109 Condition 4. for Unit No. 12 and Unit No. 13, NEC shall suitably and permanently affix the Standard Operating and Maintenance Procedures on or near the operating controls of the engine/turbine/generator sets.
3. In accordance with Approval No. 4B93109 Condition 6.D. for Unit No. 12 and Unit No. 13, in the event that either combustion turbine/generator set operates greater than 1,500 hours per calendar year (at any load condition) NEC shall make application in accordance with 310 CMR 7.02 within 90 days of the end of the calendar year to equip both turbines with water injection to control NO<sub>x</sub> emissions. The NO<sub>x</sub> emission limit with water injection and the schedule for installation of the same will be established during the required application review and approval process that will be conducted in accordance with 310 CMR 7.02(2).
4. In accordance with Approval No. 4B98043 Condition A.1. for Unit No. 12 and Unit No. 13, NEC shall comply and not exceed the energy input restrictions identified in the following ENERGY INPUT RESTRICTIONS TABLE:

<b>ENERGY INPUT RESTRICTIONS TABLE</b>		
<b>Emission Unit (EU)</b>	<b>Monthly</b>	<b>12 Month Rolling Period</b>
EU 12	41,813 MMBtu/month	252,900 MMBtu
EU 13	41,813 MMBtu/month	252,900 MMBtu

NOTE: MMBtu = Fuel heat input in million British Thermal Units

5. In accordance with Approval No. 4B02025 Section II. for Unit No. 12 and Unit No. 13, NEC shall comply with the NO<sub>x</sub> emission limitations by purchasing ERCs as provided in 310 CMR 7.00: Appendix B(3) to offset all actual emissions of NO<sub>x</sub> in excess of the emission limits set forth in 310 CMR 7.19(7)(a)2. NEC shall perform daily calculations according to the equation below in order to determine the quantity of ERCs needed to comply with the emission limits.

$$\text{ERC}_{\text{NO}_x}(\text{needed}) = (\text{AcE}_{\text{NO}_x} - \text{AIE}_{\text{NO}_x}) * 1.25$$

where:

AcE<sub>NO<sub>x</sub></sub> = actual NO<sub>x</sub> emissions from each unit in pounds per day

AIE<sub>NO<sub>x</sub></sub> = allowable NO<sub>x</sub> emissions from each unit in pounds per day

1.25 = Compliance Assurance Multiplier based on Periodic Stack Testing to monitor actual emissions

ERC<sub>NO<sub>x</sub></sub>(needed) = the daily quantity of federally enforceable emission reduction credits from sources of NO<sub>x</sub> emissions certified by the Department under 310 CMR 7.00: Appendix B(3) which must be purchased by NEC

NOTE: Calculations of ERC<sub>NO<sub>x</sub></sub>(needed) shall be rounded up to the nearest ton.

6. In accordance with Approval No. 4B02025 Section II. for Unit No. 12 and Unit No. 13, the use of NO<sub>x</sub> ERCs that are generated during the “non-ozone season” shall be restricted to use during a “non-ozone season” only, pursuant to Regulation 310 CMR 7.00: Appendix B(3)(e)8. Conversely, the use of NO<sub>x</sub> ERCs that are generated during the “ozone season” can be used at any time during the calendar year.
7. In accordance with Approval No. 4B02025 Section II., the emissions from Unit No. 12 and Unit No. 13 shall not be averaged with each other. The emissions from each individual unit will utilize ERCs for purposes of determining compliance, pursuant to 310 CMR 7.19(2)(g). 310 CMR 7.19(13)(a)(7) allows the use of annual stack tests for simple cycle combustion turbines to comply with the NO<sub>x</sub> standard. NEC does not propose to generate any ERCs from Unit No. 12 and Unit No. 13.

## **6. ALTERNATIVE OPERATING SCENARIOS**

The permittee did not request alternative operating scenarios in its operating permit application.

## **7. EMISSIONS TRADING**

### **(a) Intra-facility emission trading**

The facility did not request intra-facility emissions trading in its operating permit application.

Pursuant to 310 CMR 7.00: Appendix C(7)(b), emission trades, provided for in this permit, may be implemented provided the Permittee notifies The United States Environmental Protection Agency (EPA) and the MassDEP at least fifteen (15) days in advance of the proposed changes and the Permittee provides the information required in 310 CMR 7.00: Appendix C(7)(b)3.

Any intra-facility change that does not qualify pursuant to 310 CMR 7.00: Appendix C(7)(b)2 is required to be submitted to the MassDEP pursuant to 310 CMR 7.00: Appendix B.

### **(b) Inter-facility emission trading**

The Permittee is currently authorized to engage in emissions trading under the following state regulatory programs and state approvals:

310 CMR 7.00, Appendix B: Emission Reduction Credits  
Approval No. 4B02025: Emission Control Plan (ECP), Oxides of Nitrogen (NO<sub>x</sub>)

All increases in emissions due to emission trading, must be authorized under the applicable requirements of 310 CMR 7.00: Appendix B (the "Emissions Trading Program") and the 42 U.S.C. §7401 et seq. (the "Act"), and provided for in this permit.

## **8. COMPLIANCE SCHEDULE**

The Permittee has indicated that the facility is in compliance and shall remain in compliance with the applicable requirements contained in Sections 4 and 5.

In addition, the Permittee shall comply with any applicable requirements that become effective during the permit term.

## GENERAL CONDITIONS FOR OPERATING PERMIT

### **9. FEES**

The permittee has paid the permit application processing fee and shall pay the annual compliance fee in accordance with the fee schedule pursuant to 310 CMR 4.00.

### **10. COMPLIANCE CERTIFICATION**

All documents submitted to the MassDEP shall contain certification by the responsible official of truth, accuracy, and completeness. Such certification shall be in compliance with 310 CMR 7.01(2) and contain the following language:

"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."

The "Operating Permit Reporting Kit" contains instructions and the Annual Compliance Report and Certification and the Semi-Annual Monitoring Summary Report and Certification. The "Operating Permit Reporting Kit" is available to the Permittee via the MassDEP's web site, <http://www.mass.gov/dep/air/approvals/aqforms.htm#op>.

#### (a) Annual Compliance Report and Certification

The Responsible Official shall certify, annually for the calendar year, that the facility is in compliance with the requirements of this permit. The report shall be postmarked or delivered by January 30 to the MassDEP and to the Regional Administrator, U.S. Environmental Protection Agency - New England Region. The report shall be submitted in compliance with the submission requirements below.

The compliance certification and report shall describe:

- i. the terms and conditions of the permit that are the basis of the certification;
- ii. the current compliance status and whether compliance was continuous or intermittent during the reporting period;
- iii. the methods used for determining compliance, including a description of the monitoring, record keeping, and reporting requirements and test methods; and
- iv. any additional information required by the MassDEP to determine the compliance status of the source.

#### (b) Semi-Annual Monitoring Summary Report and Certification

The Responsible Official shall certify, semi-annually on the calendar year, that the facility is in compliance with the requirements of this permit. The report shall be postmarked or delivered by January 30 and July 30 to the MassDEP. The report shall be submitted in compliance with the submission requirements below.

The compliance certification and report shall describe:

- i. the terms and conditions of the permit that are the basis of the certification;
- ii. the current compliance status during the reporting period;
- iii. the methods used for determining compliance, including a description of the monitoring, record keeping, and reporting requirements and test methods;
- iv. whether there were any deviations during the reporting period;
- v. if there are any outstanding deviations at the time of reporting, and the Corrective Action Plan to remedy said deviation;
- vi. whether deviations in the reporting period were previously reported;
- vii. if there are any outstanding deviations at the time of reporting, the proposed date of return to compliance;
- viii. if the deviations in the reporting period have returned to compliance and date of such return to compliance; and
- ix. any additional information required by the MassDEP to determine the compliance status of the source.

## **11. NONCOMPLIANCE**

Any noncompliance with a permit condition constitutes a violation of 310 CMR 7.00: Appendix C and the Clean Air Act, and is grounds for enforcement action, for permit termination or revocation, or for denial of an operating permit renewal application by the MassDEP and/or EPA. Noncompliance may also be grounds for assessment of administrative or civil penalties under M.G.L. c.21A, §16 and 310 CMR 5.00; and civil penalties under M.G.L. c.111, §142A and 142B. This permit does not relieve the permittee from the obligation to comply with any other provisions of 310 CMR 7.00 or the Act, or to obtain any other necessary authorizations from other governmental agencies, or to comply with all other applicable Federal, State, or Local rules and regulations, not addressed in this permit.

## **12. PERMIT SHIELD**

- (a) This facility has a permit shield provided that it operates in compliance with the terms and conditions of this permit. Compliance with the terms and conditions of this permit shall be deemed compliance with all applicable requirements specifically identified in Sections 4, 5, 6, and 7, for the emission units as described in the permittee's application and as identified in this permit.

Where there is a conflict between the terms and conditions of this permit and any earlier approval or permit, the terms and conditions of this permit control.

- (b) The MassDEP has determined that the permittee is not currently subject to the requirements listed in Section 4, Table 7.
- (c) Nothing in this permit shall alter or affect the following:
  - (i) the liability of the source for any violation of applicable requirements prior to or at the time of permit issuance.

- (ii) the applicable requirements of the Acid Rain Program, consistent with 42 U.S.C. §7401, §408(a); or
- (iii) the ability of EPA to obtain information under 42 U.S.C. §7401, §114 or §303 of the Act.

### **13. ENFORCEMENT**

The following regulations found at 310 CMR 7.02(8)(h) Table 6 for wood fuel, 7.04(9), 7.05(8), 7.09 (odor), 7.10 (noise), 7.18(1)(b), 7.21, 7.22, 7.70 and any condition(s) designated as "state only" are not federally enforceable because they are not required under the Act or under any of its applicable requirements. These regulations and conditions are not enforceable by the EPA. Citizens may seek equitable or declaratory relief to enforce these regulations and conditions pursuant to Massachusetts General Law Chapter 214, Section 7A

All other terms and conditions contained in this permit, including any provisions designed to limit a facility's potential to emit, are enforceable by the MassDEP, EPA and citizens as defined under the Act.

A Permittee shall not claim as a defense in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

### **14. PERMIT TERM**

This permit shall expire on the date specified on the cover page of this permit, which shall not be later than the date 5 years after issuance of this permit.

Permit expiration terminates the permittee's right to operate the facility's emission units, control equipment or associated equipment covered by this permit, unless a timely and complete renewal application is submitted at least 6 months before the expiration date.

### **15. PERMIT RENEWAL**

Upon the MassDEP's receipt of a complete and timely application for renewal, this facility may continue to operate subject to final action by the MassDEP on the renewal application.

In the event the MassDEP has not taken final action on the operating permit renewal application prior to this permit's expiration date, this permit shall remain in effect until the MassDEP takes final action on the renewal application, provided that a timely and complete renewal application has been submitted in accordance with 310 CMR 7.00: Appendix C(13).

### **16. REOPENING FOR CAUSE**

This permit may be modified, revoked, reopened, and reissued, or terminated for cause by the MassDEP and/or EPA. The responsible official of the facility may request that the MassDEP terminate the facility's operating permit for cause. The MassDEP will reopen and amend this permit in accordance with the conditions and procedures under 310 CMR 7.00: Appendix C(14).

The filing of a request by the permittee for an operating permit revision, revocation and reissuance, or termination, or a notification of a planned change or anticipated noncompliance does not stay any operating permit condition.

## **17. DUTY TO PROVIDE INFORMATION**

Upon the MassDEP's written request, the permittee shall furnish, within a reasonable time, any information necessary for determining whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the permittee shall furnish to the MassDEP copies of records that the permittee is required to retain by this permit.

## **18. DUTY TO SUPPLEMENT**

The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information. The permittee shall also provide additional information as necessary to address any requirements that become applicable to the facility after the date a complete renewal application was submitted but prior to release of a draft permit.

The permittee shall promptly, on discovery, report to the MassDEP a material error or omission in any records, reports, plans, or other documents previously provided to the MassDEP.

## **19. TRANSFER OF OWNERSHIP OR OPERATION**

This permit is not transferable by the permittee unless done in accordance with 310 CMR 7.00: Appendix C(8)(a). A change in ownership or operation control is considered an administrative permit amendment if no other change in the permit is necessary and provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between current and new permittee, has been submitted to the MassDEP.

## **20. PROPERTY RIGHTS**

This permit does not convey any property rights of any sort, or any exclusive privilege.

## **21. INSPECTION AND ENTRY**

Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized representatives of the MassDEP, and EPA to perform the following:

- (a) enter upon the permittee's premises where an operating permit source activity is located or emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

- (c) inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- (d) Sample or monitor at reasonable times any substances or parameters for the purpose of assuring compliance with the operating permit or applicable requirements as per 310 CMR 7.00 Appendix C(3)(g)(12).

## **22. PERMIT AVAILABILITY**

The permittee shall have available at the facility, at all times, a copy of the materials listed under 310 CMR 7.00: Appendix C(10)(e) and shall provide a copy of the permit, including any amendments or attachments thereto, upon request by the MassDEP or EPA.

## **23. SEVERABILITY CLAUSE**

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

## **24. EMERGENCY CONDITIONS**

The permittee shall be shielded from enforcement action brought for noncompliance with technology based<sup>1</sup> emission limitations specified in this permit as a result of an emergency<sup>2</sup>. In order to use emergency as an affirmative defense to an action brought for noncompliance, the permittee shall demonstrate the affirmative defense through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (a) an emergency occurred and that the permittee can identify the cause(s) of the emergency;
- (b) the permitted facility was at the time being properly operated;
- (c) during the period of the emergency, the permittee took all reasonable steps as expeditiously as possible, to minimize levels of emissions that exceeded the emissions standards, or other requirements in this permit; and
- (d) the permittee submitted notice of the emergency to the MassDEP within two (2) business days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emission,

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<sup>1</sup> Technology based emission limits are those established on the basis of emission reductions achievable with various control measures or process changes (e.g., a new source performance standard) rather than those established to attain health based air quality standards.

<sup>2</sup> An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation would require immediate corrective action to restore normal operation, and that causes the source to exceed a technology based limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operations, operator error or decision to keep operating despite knowledge of any of these things.

and corrective actions taken.

If an emergency episode requires immediate notification to the Bureau of Waste Site Cleanup/Emergency Response, immediate notification to the appropriate parties should be made as required by law.

## **25. PERMIT DEVIATION**

Deviations are instances where any permit condition is violated and not reported as an emergency pursuant to section 24 of this permit. Reporting a permit deviation is not an affirmative defense for action brought for noncompliance. Any reporting requirements listed in Table 6. of this Operating Permit shall supercede the following deviation reporting requirements, if applicable.

The Permittee shall report to the MassDEP's Regional Bureau of Waste Prevention the following deviations from permit requirements, by telephone or fax, within three (3) days of discovery of such deviation:

- Unpermitted pollutant releases, excess emissions or opacity exceedances measured directly by CEMS/COMS, by EPA reference methods or by other credible evidence, which are ten percent (10%) or more above the emission limit.
- Exceedances of parameter limits established by your Operating Permit or other approvals, where the parameter limit is identified by the permit or approval as surrogate for an emission limit.
- Exceedances of permit operational limitations directly correlated to excess emissions.
- Failure to capture valid emissions or opacity monitoring data or to maintain monitoring equipment as required by statutes, regulations, your Operating Permit, or other approvals.
- Failure to perform QA/QC measures as required by your Operating Permit or other approvals for instruments that directly monitor compliance.

For all other deviations, three (3) day notification is waived and is satisfied by the documentation required in the subsequent Semi-Annual Monitoring Summary and Certification. Instructions and forms for reporting deviations are found in the MassDEP Bureau of Waste Prevention Air Operating Permit Reporting Kit, which is available to the Permittee via the MassDEP's web site, <http://www.mass.gov/dep/air/approvals/aqforms.htm#op>.

This report shall include the deviation, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and the corrective actions or preventative measures taken.

Deviations that were reported by telephone or fax within 3 days of discovery, said deviations shall also be submitted in writing via the Operating Permit Deviation Report to the regional Bureau of Waste Prevention within ten (10) days of discovery. For deviations, which do not require 3-day verbal notification, follow-up reporting requirements are satisfied by the documentation required in the aforementioned Semi-Annual Monitoring Summary and Certification.

## **26. OPERATIONAL FLEXIBILITY**

The permittee is allowed to make changes at the facility consistent with 42 U.S.C. §7401,

§502(b)(10) not specifically prohibited by the permit and in compliance with all applicable requirements provided the permittee gives the EPA and the MassDEP written notice fifteen days prior to said change; notification is not required for exempt activities listed at 310 CMR 7.00: Appendix C(5)(h) and (i). The notice shall comply with the requirements stated at 310 CMR 7.00: Appendix C(7)(a) and will be appended to the facility's permit. The permit shield allowed for at 310 CMR 7.00: Appendix C(12) shall not apply to these changes.

## **27. MODIFICATIONS**

- (a) Administrative Amendments - The permittee may make changes at the facility which are considered administrative amendments pursuant to 310 CMR 7.00: Appendix C(8)(a)1., provided they comply with the requirements established at 310 CMR 7.00: Appendix C(8)(b).
- (b) Minor Modifications - The permittee may make changes at the facility which are considered minor modifications pursuant to 310 CMR 7.00: Appendix C(8)(a)2., provided they comply with the requirements established at 310 CMR 7.00: Appendix C(8)(d).
- (c) Significant Modifications - The permittee may make changes at the facility which are considered significant modifications pursuant to 310 CMR 7.00: Appendix C(8)(a)3., provided they comply with the requirements established at 310 CMR 7.00: Appendix C(8)(c).
- (d) No permit revision shall be required, under any approved economic incentives program, marketable permits program, emission trading program and other similar programs or processes, for changes that are provided in this operating permit. A revision to the permit is not required for increases in emissions that are authorized by allowances acquired pursuant to the Acid Rain Program under Title IV of the Act, provided that such increases do not require an operating permit revision under any other applicable requirement.

## **28. LEGEND OF ABBREVIATED TERMS IN OPERATING PERMIT**

\*Not all abbreviations are present in every Operating Permit

< - Less Than

> - Greater Than

#/hr - Pounds Per Hour

10<sup>6</sup> BTU/hr - 1,000,000 BTU Per Hour

AOS – Alternative Operating Scenario

AQCR - Air Quality Control Region

CEM - Continuous Emission Monitor

CO - Carbon Monoxide

EPA - Environmental Protection Agency

FMF FAC. NO. - Facility Master File Number

FMF RO NO. - Facility Master File Regulated Object Number

FT<sup>3</sup>/day - Cubic Feet Per Day

HHV - Higher Heating Value

ISO - Represent 59F, 60% Relative Humidity, 29.92 Inches Mercury At Sea Level

MADEP - Massachusetts Department of Environmental Protection

MMBTU/hr - Million British Thermal Units Per Hour

NH<sub>3</sub> - Ammonia

NO<sub>x</sub> - Nitrogen Oxides

PB - Lead

PLT ID - Plant Identification

PM - Particulate Matter

PPM - Parts Per Million

PTE - Potential To Emit

SO<sub>2</sub> - Sulfur Dioxide

TPY - Tons Per Year

VOC - Volatile Organic Compound

## **APPEAL CONDITIONS FOR OPERATING PERMIT**

This permit is an action of the MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing within 21 days of issuance of this permit. In addition, any person who participates in any public participation process required by the Federal Clean Air Act, 42 U.S.C. §7401, §502(b)(6) or under 310 CMR 7.00: Appendix C(6), with respect to the MassDEP's final action on operating permits governing air emissions, and who has standing to sue with respect to the matter pursuant to federal constitutional law, may initiate an adjudicatory hearing pursuant to Chapter 30A, and may obtain judicial review, pursuant to Chapter 30A, of a final decision therein.

If an adjudicatory hearing is requested, the facility must continue to comply with all existing federal and state applicable requirements to which the facility is currently subject, until a final decision is issued in the case or the appeal is withdrawn. During this period, the application shield shall remain in effect, and the facility shall not be in violation of the Act for operating without a permit.

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 permit is not consistent with 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:

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

The 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.