

Department of Environmental Protection

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Prevention of Significant Deterioration Permit Application No. NE-12-022 Transmittal No. X254064

Footprint Power Salem Harbor Development LP Salem Harbor Station 24 Fort Avenue Salem, MA 01970

692 MW Combustion Turbine Combined Cycle Electric Generating Facility

Pursuant to the provisions of the Clean Air Act (CAA) Chapter I, Part C (42 U.S.C. Section 7470, et *seq.*), the regulations found at the Code of Federal Regulations Title 40, Section 52.21, and the Agreement for Delegation of the Federal Prevention of Significant Deterioration Program, dated April 2011, by the United States Environmental Protection Agency, Region 1 (EPA) to the Massachusetts Department of Environmental Protection (MassDEP), MassDEP is issuing a Prevention of Significant Deterioration (PSD) Permit to Footprint Power Salem Harbor Development LP (the Permittee) concerning its proposed, new 692 Megawatt, combined cycle electric generating facility to be located at 24 Fort Avenue in Salem, MA (proposed Facility or Facility). This is the site of the present Salem Harbor Station electric generating facility.

The design, construction, and operation of the proposed Facility shall be subject to the permit conditions and permit limitations set forth herein. This PSD Permit is valid only for the equipment described herein and as submitted to MassDEP in the December 21, 2012 application for a PSD Permit under 40 CFR 52.21 and subsequent application submittal addenda. In accordance with 40 CFR 124.15(b), this PSD Permit shall be effective 30 days after the date of service of notice of this final decision unless review by the Environmental Appeals Board (EAB) is requested in accordance with 40 CFR 52.21(b)(9) within 18 months after this PSD Permit takes effect, is discontinued for a period of 18 months or more, or is not completed within a reasonable time. Pursuant to 40 CFR 52.21, MassDEP may extend the 18 month period upon a satisfactory showing that an extension is justified. This Final PSD Permit does not relieve the Permittee from the obligation to comply with applicable state and federal air pollution control rules and regulations. Failure to comply with the terms and conditions of this PSD Permit may result in enforcement action by MassDEP and/or EPA pursuant to Sections 113 and 167 of the CAA.

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.

James E. Belsky Permit Chief Bureau of Waste Prevention January 30, 2014 Date Issued

This information is available in alternate format. Call Michelle Waters-Ekanem, Diversity Director, at 617-292-5751. TDD# 1-866-539-7622 or 1-617-574-6868 MassDEP Website: www.mass.gov/dep

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I. <u>PROJECT DESCRIPTION (For Informational Purposes)</u>

Footprint Power Salem Harbor Development LP (the Permittee) proposes to construct and operate a nominal 630 Megawatt (MW) natural gas fired, quick start (capable of producing 300 MW within 10 minutes of startup) combined cycle electric generating facility (the Facility) at Salem Harbor Station. With duct firing, the proposed Facility will be capable of generating an additional 62 MW, for a total of 692 MW. The existing Salem Harbor Station Boiler Units 1 and 2 were removed from service on or prior to December 31, 2011. Boiler Unit 3 and Boiler Unit 4 are required to cease operation, permanently shutdown, and be rendered inoperable no later than June 1, 2014.

The Facility components include two combustion turbine generators with integrated duct burners, Heat Recovery Steam Generators, and Steam Turbine Generators, as well as an auxiliary boiler, an emergency engine/generator set, a fire pump, an aqueous ammonia storage tank, an auxiliary cooling tower, and generator step-up transformers.

II. <u>EMISSION UNIT (EU) IDENTIFICATION</u>

Each Emission Unit (EU) identified in Table 1 is subject to and regulated by this PSD Permit:

	Table 1		
EU#	Description	Design Capacity	Pollution Control
			Device (PCD)
EU1	General Electric Model No. 107F Series 5	2,449 MMBtu/hr,	Dry Low NO _x
	Combustion Turbine/Heat Recovery Steam Generator	HHV (energy	Combustors (PCD1)
	Including Duct Burner	input)	Selective Catalytic
			Reduction (PCD2)
		346 MW (electric	Oxidation Catalyst
		power output)	(PCD3)
EU2	General Electric Model No. 107F Series 5	2,449 MMBtu/hr,	Dry Low NO _x
	Combustion Turbine/Heat Recovery Steam Generator	HHV (energy	Combustors (PCD4)
	Including Duct Burner	input)	Selective Catalytic
			Reduction (PCD5)
		346 MW (electric	Oxidation Catalyst
		power output)	(PCD6)
EU3	Cleaver Brooks Model No. CBND-80E-300D-65 or	80 MMBtu/hr,	Ultra Low NO _x Burners
	equivalent	HHV (energy	(PCD7)
	Auxiliary Boiler	input)	Oxidation Catalyst
			(PCD8)

	Table 1		
EU#	Description	Design Capacity	Pollution Control Device (PCD)
EU4	Cummins Model No. DQFAA or equivalent Emergency Engine/Generator	7.4 MMBtu/hr, HHV (energy input)	None
		1102 bhp (engine mechanical power output)	
		750 KW (generator electric power output)	
EU5	Cummins Model No. CFP9E-F50 or equivalent Fire Pump Engine	2.7 MMBtu/hr, HHV (energy input)	None
		371 bhp (engine mechanical power output)	

Table 1 Key:

EU# = Emission Unit Number

No. = Number

MMBtu/hr = fuel heat input, million British thermal units per hour

HHV = higher heating value basis

bhp = mechanical engine rating, brake horsepower MW = generator net electrical output, Megawatts

KW = generator net electrical output, Kilowatts

 $NO_x = Oxides of Nitrogen$

III. OPERATIONAL, PRODUCTION and EMISSION LIMITS

The Facility is subject to, and the Permittee shall ensure that the Facility shall not exceed the Operational, Production, and Emission Limits as contained in Table 2 below, including footnotes:

		Table 2	
EU#	Operational / Production Limit	Air Contaminant	Emission Limit Per EU
EU1, EU2	Operation at ≥ MECL, ⁽¹⁷⁾ excluding start-ups and shutdowns	NO _x (no duct firing)	$\leq 17.0 \text{ lb/hr}^{(1, 2)} \\ \leq 0.0074 \text{ lb/MMBtu}^{(1)} \\ \leq 2.0 \text{ ppmvd } @ 15\% \text{ O}_2^{(1)} \\ \leq 0.051 \text{ lb/MW-hr}^{(1, 2, 9, 13)}$
	Fuel Heat Input Rate of each EU: ≤ 2,449 MMBtu per hour, HHV		$\leq 15.0 \text{ ppmvd } @ 15\% \text{ O}_2$ or $\leq 0.43 \text{ lb/MW-hr}^{(12)}$
	Natural Gas shall be the only fuel of use. Fuel Heat Input of each EU: ≤ 18,888,480 MMBtu, HHV per 12-month rolling period ⁽⁹⁾	NO _x (duct firing)	$\leq 18.1 \text{ lb/hr}^{(1, 2)}$ $\leq 0.0074 \text{ lb/MMBtu}^{(1)}$ $\leq 2.0 \text{ ppmvd @ 15\% O_2^{(1)}}$ $\leq 0.055 \text{ lb/MW-hr}^{(1, 2, 14)}$ $\leq 15.0 \text{ ppmvd @ 15\% O_2}$ or
	penou	S in Fuel H ₂ SO ₄ (no duct firing)	
		H ₂ SO ₄ (duct firing)	$\leq 2.3 \text{ lb/hr}^{(1, 2)} \\ \leq 0.0010 \text{ lb/MMBtu}^{(1)} \\ \leq 0.1 \text{ ppmvd } @ 15\% \text{ O}_2^{(1)} \\ \leq 0.008 \text{ lb/MW-hr}^{(1, 2, 14)}$
		PM/PM ₁₀ /PM _{2.5} (no duct firing)	$\leq 8.8 \text{ lb/hr}^{(1,7)} \\ \leq 0.0071 \text{ lb/MMBtu}^{(1,7)} \\ \leq 0.029 \text{ lb/MW-hr}^{(1,7,9,13)}$
		PM/PM ₁₀ /PM _{2.5} (duct firing)	$\leq 13.0 \text{ lb/hr}^{(1,7)} \\ \leq 0.0062 \text{ lb/MMBtu}^{(1,7)} \\ \leq 0.041 \text{ lb/MW-hr}^{(1,7,14)}$
		Greenhouse Gases, CO _{2e}	$\leq 825 \text{ lb/MW-hr}^{(10)}$ $\leq 895 \text{ lb/MW-hr}^{(15)}$
EU1, EU2	Operation at < MECL during start-ups ^(3, 12)	NO _x	\leq 89 lb per event ^(4, 11)
		S in Fuel H ₂ SO ₄	$\frac{\leq 0.5 \text{ grains/100 scf}}{\leq 1.3 \text{ lb per event}^{(4, 11)}}$

Table 2			
EU#	Operational / Production Limit	Air Contaminant	Emission Limit Per EU
EU1, EU2	Start-up duration: ≤ 45 minutes ^(3, 12)	PM/PM ₁₀ /PM _{2.5}	\leq 6.60 lb per event ^(4,7, 11)
	Natural Gas shall be the only fuel of use.		
	Operation at < MECL	NO _x	≤ 10 lb per event ⁽¹¹⁾
	during shutdowns ^(3, 12)	S in Fuel	\leq 0.5 grains/100 scf
		H_2SO_4	≤ 0.2 lb per event ⁽¹¹⁾
	Shutdown duration: $\leq 27 \text{ minutes}^{(3, 12)}$	PM/PM ₁₀ /PM _{2.5}	\leq 3.96 lb per event ^(8, 11)
	Natural Gas shall be the only fuel of use.		
EU3	Operation at \geq MECL ⁽¹⁸⁾ Fuel Heat Input Rate:	NO _x	
	≤ 80 MMBtu per hour,	S in Fuel	≤ 0.5 grains/100 scf
	HHV	H_2SO_4	$\frac{\leq 0.072 \text{ lb/hr}^{(1)}}{< 0.0009 \text{ lb/MMBtu}^{(1)}}$
	Natural Gas shall be the		≤ 0.35 ppmvd @ 3% O ₂ ⁽¹⁾
	only fuel of use.	PM/PM ₁₀ /PM _{2.5}	$\frac{1}{\leq 0.4 \text{ lb/hr}^{(1,7)}}$ \$\le 0.005 \text{ lb/MMBtu}^{(1,7)}\$
	Total Fuel Heat Input:		
	\leq 525,600 MMBtu, HHV per 12-month rolling period	Greenhouse Gases, CO _{2e}	\leq 119.0 lb/MMBtu
EU4	\leq 300 hours of operation per 12-month rolling period	NO _x and VOC (NMHC as CH _{1.8}), Combined Total (<i>limit</i>	\leq 11.60 lb/hr ⁽⁵⁾ \leq 4.8 gm/bhp-hr ⁽⁵⁾ \leq 6.4 gm/KW-hr ⁽⁵⁾
	Ultra Low Sulfur Diesel	includes VOC)	
	Fuel Oil shall be the only	S in Fuel	$\leq 0.0015\%$ by weight
	fuel of use.	H_2SO_4	$\leq 0.0009 \text{ lb/hr}^{(5)}$
		PM/PM ₁₀ /PM _{2.5}	$\leq 0.36 \text{ lb/hr}^{(5)}$
			≤ 0.15 gm/bhp-hr ⁽⁵⁾ ≤ 0.2 gm/KW-hr ⁽⁵⁾
		Greenhouse Gases, CO _{2e}	\leq 162.85 lb/MMBtu

	Table 2			
EU#	Operational / Production Limit	Air Contaminant	Emission Limit Per EU	
EU5	 ≤ 300 hours of operation per 12-month rolling period Ultra Low Sulfur Diesel Fuel Oil shall be the only fuel of use. 	NO _x and VOC (NMHC as CH _{1.8}), Combined Total (<i>limit</i> <i>includes VOC</i>) S in Fuel H ₂ SO ₄ PM/PM ₁₀ /PM _{2.5}	$ \leq 2.44 \text{ lb/hr}^{(5)} \\ \leq 3.0 \text{ gm/bhp-hr}^{(5)} \\ \leq 4.0 \text{ gm/KW-hr}^{(5)} \\ \hline \leq 0.0015\% \text{ by weight} \\ \hline \leq 0.0003 \text{ lb/hr}^{(6)} \\ \leq 0.12 \text{ lb/hr}^{(5)} \\ \leq 0.15 \text{ gm/bhp-hr}^{(5)} \\ \leq 0.2 \text{ gm/KW-hr}^{(5)} $	
		Greenhouse Gases, CO _{2e}	\leq 162.85 lb/MMBtu	
Facility-Wide	NA	$\frac{NO_{x}}{PM/PM_{10}/PM_{2.5}}$ $\frac{H_{2}SO_{4}}{CO_{2}}$ Greenhouse Gases, CO _{2e}	$ \leq 144.8 \text{ TPY}^{(6)} \\ \leq 82.0 \text{ TPY}^{(6, 7)} \\ \leq 19.0 \text{ TPY}^{(6)} \\ \leq 2,277,333 \text{ TPY}^{(6)} \\ \leq 2,279,530 \text{ TPY}^{(6)} $	

Table 2 Notes:

1. Emission limits are one hour block averages and do not apply during start-ups and shutdowns.

2. Emission rates are based on burning natural gas in any one combustion turbine at a maximum natural gas firing rate of 2,300 MMBtu/hr, HHV (no duct firing), at 0 °F ambient temperature, and 2,449 MMBtu/hr, HHV (duct firing), at 90 °F ambient temperature, both at 14.7 psia ambient pressure and 60% ambient relative humidity. These constitute worst case emissions.

3. Start-ups include the time from flame-on in the combustor (after a period of downtime) until the minimum emissions compliance load (MECL) is reached. Shutdowns include the time from dropping below the MECL until flame-out.

4. Emission limits represent worst case emissions for cold start-ups. Emissions for warm and hot start-ups are expected to be lower.

5. Emission limits are one hour block averages and apply throughout the operating range, including during startup and shutdown. Emissions are based on manufacturer's certifications using gaseous testing procedures in accordance with 40 CFR Part 89. VOC emissions are assumed to be equivalent to NMHC emissions. In accordance with the calculations found at 40 CFR 89.424 for No. 2 diesel fuel oil exhaust, NMHC mass emissions are calculated by assuming that each carbon atom is accompanied (using a weighted average) by 1.8 atoms of hydrogen (i.e. NMHC as $CH_{1.8}$), which corresponds to a gas density of 0.5746 kg/m³. (*Limit includes VOC*)

6. Facility emissions include the two CTG/HRSG pairs with duct burners (EU1 and EU2), the auxiliary boiler (EU3), the emergency diesel engine/generator set (EU4), the fire pump engine (EU5), and the auxiliary cooling tower. Emissions for each of EU1 and EU2 are based on 8,040 hours of natural gas firing per 12 month rolling period at 100% load and 50°F ambient temperature with no duct burner firing (2,130 MMBtu/hr, HHV) or evaporative cooling, and 720 hours of natural gas firing per 12 month rolling period at peak load (approximately 102% load) and 90°F ambient temperature with 100% duct burner firing (2,449 MMBtu/hr, HHV) and evaporative cooling, and include start-up and shutdown emissions. Emissions for EU3 are based on 6,570 hours of natural gas firing per 12

month rolling period at 100% load (80 MMBtu/hr, HHV). Emissions for each of EU4 and EU5 are based on restricted operation of 300 hours per unit, including maintenance and periodic readiness testing, while firing ULSD having a sulfur content that does not exceed 0.0015% by weight. Worst case NO_x and VOC emissions for EU4 are assumed to be emitted at the EPA Tier 2 limit of 6.4 gm/KW-hr and the EPA Tier 1 limit of 1.3 gm/KW-hr, respectively (*Limit includes VOC*). Worst case NO_x and VOC emissions for EU5 are assumed to be emitted at the EPA Tier 3 limit of 4.0 gm/KW-hr and the EPA Tier 1 limit of 1.3 gm/KW-hr, respectively (*Limit includes VOC*). Worst case NO_x and VOC emissions for EU5 are assumed to be emitted at the EPA Tier 3 limit of 4.0 gm/KW-hr and the EPA Tier 1 limit of 1.3 gm/KW-hr, respectively (*Limit includes VOC*). EPA Tier 1, 2, and 3 emission standards are published in the United States Code of Federal Regulations, Title 40, Part 89 [40 CFR Part 89]. The auxiliary cooling tower contributes to $PM/PM_{10}/PM_{2.5}$ emissions only based on 8,760 hours of operation per 12 month rolling period.

7. Emission limit is for the sum of filterable and condensable particulates, including sulfates.

8. Maximum fuel (natural gas only) heat input for each CTG/HRSG with duct burner is based on 8,040 hours of operation per 12 month rolling period at 100% load and 50°F ambient temperature with no duct burner firing (2,130 MMBtu/hr, HHV), and 720 hours of operation per 12 month rolling period at peak load (approximately 102% load) and 90°F ambient temperature with 100% duct burner firing (2,449 MMBtu/hr, HHV). Maximum total fuel heat input for the auxiliary boiler is based on 6,570 hours of operation per 12 month rolling period at 100% load (80 MMBtu/hr, HHV).

9. Emission limit is based on full (base) load (100% load) without duct firing ISO corrected (59 °F, 14.7 psia, 60% humidity) heat rate of 6,940 Btu, higher heating value, per KW-hr net electrical output to the grid.

10. Emission limit is based on full (base) load (100% load) without duct firing ISO corrected (59 °F, 14.7 psia, 60% humidity) heat rate of 6,940 Btu, higher heating value, per KW-hr net electrical output to the grid and a CO_{2e} emission factor of 119.0 lb/MMBtu. This emission factor is based on a CO_2 emission factor of 118.9 lb/MMBtu calculated from Equation G-4 of 40 CFR Part 75 Appendix G plus an emission factor of 0.1 lb/MMBtu for other greenhouse gases (methane and nitrous oxide) calculated utilizing the emission factors for these two pollutants from Table C-2 of 40 CFR Part 98 Subpart C and the global warming potentials for these two pollutants from Table A-1 of 40 CFR Part 98 Subpart A... Compliance shall be determined during the initial emissions compliance test performed within 180 days after initial firing of the EU. If the EU does not meet this limit, then the Permittee has shown compliance with this limit during a subsequent emissions compliance test.

11. Start-up and shutdown emission limits and duration are subject to revision by MassDEP based on review of compliance testing (stack testing) data and CEMs data generated from the first year of commercial operation.

12. NO_x emission limits are from 40 CFR Part 60 Subpart KKKK. Compliance with the BACT NO_x emission limits of this PSD Permit shall be deemed compliance with the NO_x limits from 40 CFR Part 60 Subpart KKKK.

13. Limit is based on an initial compliance test at full (base) (100% load) with no duct firing. Compliance demonstration shall be made by emissions compliance testing within 180 days after initial firing of each EU.

14. Limit is based on an initial compliance test at peak load (approximately 102% load) with 100% duct firing. Compliance demonstration shall be made by emissions compliance testing within 180 days after initial firing of each EU.

15. Emission limit is effective 365 days after initial firing of the EU and is based on a 365 day rolling average, net electrical output to the grid and a CO_{2e} emission factor of 119.0 lb/MMBtu (see Footnote 11 above). A new 365 day rolling average emission rate shall be calculated each day by calculating the arithmetic average of all hourly emission rates for the preceding 365 days, excluding the hours in which the EU was not operating. Hourly CO_{2e} mass emissions (lb) shall be calculated by obtaining monitored and recorded actual hourly heat input (MMBtu) and multiplying by the CO_{2e} emission factor of 119.0 lb/MMBtu.

16. Minimum Emissions Compliance Load (MECL) for EU1 and EU2 shall be a function of ambient temperature and other system parameters.

17. MECL for EU3 shall be determined during the initial emissions compliance testing to be performed within 180 days after initial firing of EU3.

Table 2 Key:

EU# = Emission Unit Number PSD = Prevention of Significant Deterioratrion No. = Number $NO_x = Nitrogen Oxides$ VOC = Volatile Organic Compounds NMHC = Non-Methane Hydrocarbons S = SulfurPM = Total Particulate Matter PM_{10} = Particulate Matter less than or equal to 10 microns in diameter PM_{25} = Particulate Matter less than or equal to 2.5 microns in diameter $H_2SO_4 = Sulfuric Acid$ $CO_2 = Carbon Dioxide$ CO_{2e} = Greenhouse Gases expressed as Carbon Dioxide equivalent and calculated by multiplying each of the six greenhouse gases (Carbon Dioxide, Nitrous Oxide, Methane, Hydrofluorocarbons, Perfluorocarbons, Sulfur Hexafluoride) mass amount of emissions, in tons per year, by the gas's associated global warming potential published at Table A-1 of 40 CFR Part 98, Subpart A and summing the six resultant values. lb = poundsgrains/scf = grains per standard cubic foot lb/hr = pounds per hour MMBtu = million British thermal units, higher heating value (HHV) basis lb/MMBtu = pounds per million British thermal units ppmvd @ 15% O_2 = parts per million by volume, dry basis, corrected to 15 percent oxygen ppmvd @ 3% O_2 = parts per million by volume, dry basis, corrected to 3 percent oxygen scf = standard cubic feet $kg/m^3 = kilograms$ per cubic meter % = percentgm/KW-hr = grams per Kilowatt-hour lb/MW-hr = pounds per Megawatt-hour net electrical output to the grid Btu/KW-hr = British thermal units per Kilowatt-hour net electrical output to the grid TPY = tons per 12-month rolling period °F = degrees Fahrenheit psia = pounds per square inch, absolute EPA = Unites States Environmental Protection Agency CFR = Code of Federal Regulations ISO = International Organization for Standardization CTG/HRSG = combustion turbine generator/heat recovery steam generator ULSD = Ultra Low Sulfur Diesel Fuel Oil containing a maximum of 0.0015 weight percent sulfur CEMS = Continuous Emission Monitoring Systems HHV = higher heating value basis MECL = minimum emissions compliance load < = less than > = greater than < = less than or equal to > = greater than or equal to NA = Not Applicable

IV. MONITORING AND TESTING REQUIREMENTS

EU# Monitoring and Testing Requirements EU1, I. The Permittee shall ensure that the Facility is constructed to accommodate the emissions EU2, EU3 (compliance) testing requirements as stipulated in 40 CFR Part 60 Appendix A. The two outlet sampling ports (90 degrees apart from each other) for each emission unit must be located at a minimum of one duct diameter upstream and two duct diameters downstream of any flow disturbance. In addition, the Permittee shall facilitate access to the sampling ports and testing equipment by constructing platforms, ladders, or other necessary equipment. EU1, 2. The Permittee shall ensure that compliance testing of the Facility is completed within 180 EU2, EU3 days after initial firing of each EU to demonstrate compliance with the emission limits specified in Table 2 of this PSD Permit. All emissions Testing' and in accordance with MassDEP's "Guidelines for Source Emissions Testing" and in accordance with MassDEP's "Guidelines for Source Emissions Testing such that MassDEP personnel can witness it. 3. The Permittee shall conduct initial compliance tests of the Facility to document actual emissions of EU1, EU2, and EU3 so as to determine their compliance status versus the emission limits (in lb/n, lb/MMBtu, ppnuvd, and lb/MW-hr, as applicable) in Table 2 for the pollutants listed below. Testing for these pollutants for EU1 and EU2 as specified below shall be conducted at four (4) load conditions that cover the entire normal operating range: the minimum emissions compliance load (MECL); 75 percent load; 100 percent (base) load without duct firing; and peak (approximately 102 percent load; 100 percent (base) load without duct firing; and peak (approximately 102, CO2, H ₂ SO4 Testing for these pollutants for EU3 as specified below sha		Table 3
 EU2, EU3 (compliance) testing requirements as stipulated in 40 CFR Part 60 Appendix A. The two outlet sampling ports (90 degrees apart from each other) for each emission unit must be located at a minimum of one duct diameter upstream and two duct diameters downstream of any flow disturbance. In addition, the Permittee shall facilitate access to the sampling ports and testing equipment by constructing platforms, ladders, or other necessary equipment. EU1, 2. The Permittee shall ensure that compliance testing of the Facility is completed within 180 EU2, EU3 days after initial firing of each EU to demonstrate compliance with the emission limits specified in Table 2 of this PSD Permit. All emissions testing and in accordance with EPA reference test methods as specified in 40 CFR Part 60, Appendix A, 40 CFR Part 60 Suppendix A, 40 FR Part 60 Suppendix A, 40 CFR Part 60 Suppendix A, 40 FR Part 60 Suppendix A, 40 F	EU#	Monitoring and Testing Requirements
 sampling ports (90 degrees apart from each other) for each emission unit must be located at a minimum of one duct diameter upstream and two duct diameters downstream of any flow disturbance. In addition, the Permittee shall facilitate access to the sampling ports and testing equipment by constructing platforms, ladders, or other necessary equipment. EU1, 2. The Permittee shall ensure that compliance testing of the Facility is completed within 180 EU2, EU3 days after initial firing of each EU to demonstrate compliance with the emission limits specified in Table 2 of this PSD Permit. All emissions testing shall be conducted in accordance with MassDEP's "Guidelines for Source Emissions Testing" and in accordance with EPA reference test methods as specified in 40 CFR Part 60, Appendix A, 40 CFR Parts 72 and 75, or by another method which has been approved in writing by MassDEP. The Permittee shall conduct initial compliance tests of the Facility to document actual emissions of EU1, EU2, and EU3 so as to determine their compliance status versus the emission limits (in 1b/hr, 1b/MMBtu, ppmvd, and 1b/MW-hr, as applicable) in Table 2 for the pollutants listed below. Testing for these pollutants for EU1 and EU2 as specified below shall be conducted at four (4) load conditions that cover the entire normal operating range: the minimum emissions compliance load (MECL); 75 percent load; 100 percent duct firing. NO_x, PM, PM₁₀, PM_{2,5}, CO₂, H₂SO₄ Testing for these pollutants for EU3 as specified below shall be conducted at four (4) load conditions that cover the entire normal operating range: the MECL (to be determined during the compliance test); 50 percent load; 75 percent load; and 100 percent load. NO_x, PM, PM₁₀, PM_{2,5}, H₂SO₄ EU1, EU2 4. The above referenced emissions for EU1 and EU2. 5. The Permittee shall tune EU3 according to procedures contained in EPA 340/1-83-023 "Combustion efficiency Optimiz	,	
 minimum of one duct diameter upstream and two duct diameters downstream of any flow disturbance. In addition, the Permittee shall facilitate access to the sampling ports and testing equipment by constructing platforms, ladders, or other necessary equipment. EU1, The Permittee shall ensure that compliance testing of the Facility is completed within 180 EU2, EU3 days after initial firing of each EU to demonstrate compliance with the emission limits specified in Table 2 of this PSD Permit. All emissions testing' and in accordance with EPA reference test methods as specified in 40 CFR Part 60, Appendix A, 40 CFR Part 60 Subpart KKKK, 40 CFR Parts 72 and 75, or by another method which has been approved in writing by MassDEP. The Permittee shall schedule the compliance testing such that MassDEP personnel can witness it. The Permittee shall conduct initial compliance tests of the Facility to document actual emissions of EU1, EU2, and EU3 so as to determine their compliance status versus the emission limits (in lb/hr, lb/MMBtu, ppmvd, and lb/MW-hr, as applicable) in Table 2 for the pollutants listed below. Testing for these pollutants for EU1 and EU2 as specified below shall be conducted at four (4) load conditions that cover the entire normal operating range: the minimum emissions compliance load (MECL); 75 percent load; 100 percent (base) load without duct firing; and peak (approximately 102 percent load) with 100 percent duct firing. NO_x, PM, PM₁₀, PM_{2.5}, H₂SO₄ Testing for these pollutants for EU3 as specified below shall be conducted at four (4) load conditions that cover the entire normal operating range: the MECL (to be determined during the compliance test); 50 percent load; 75 percent load; and 100 percent load. NO_x, PM, PM₁₀, PM_{2.5}, H₂SO₄ EU1, EU2 4. The above referenced emissions testing shall include parametric monitoring testing for PM, PM₁₀, and PM_{2.5}, H₂SO₄	EU2, EU3	
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 conditions that cover the entire normal operating range: the MECL (to be determined during the compliance test); 50 percent load; 75 percent load; and 100 percent load. NO_x, PM, PM₁₀, PM_{2.5}, H₂SO₄ EU1, EU2 4. The above referenced emissions testing shall include parametric monitoring testing for PM, PM₁₀, and PM_{2.5} emissions for EU1 and EU2. EU3 5. The Permittee shall tune EU3 according to procedures contained in EPA 340/1-83-023 "Combustion Efficiency Optimization Manual for Operators of Oil and Gas Fired Boilers" with the goal of reducing air pollutant emissions to optimum levels. In addition, the Permittee shall tune EU3 in accordance with said procedures and inspect and maintain EU3 per manufacturer recommendations as well as test EU3 for efficient operation on an annual basis. The Permittee shall allow MassDEP personnel to witness tuning of EU3 if and when 		Testing for these pollutants for EU3 as specified below shall be conducted at four (A) load
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basis. The Permittee shall allow MassDEP personnel to witness tuning of EU3 if and when		
requested by MassDEP.		
		requested by MassDEP.

	Table 3
EU#	Monitoring and Testing Requirements
EU1, EU2, EU3	6. The Permittee shall install, calibrate, test, and operate a Data Acquisition and Handling System(s) (DAHS) and CEMS serving EU1 and EU2 to measure and record the following:
	a) O_2 ; b) NO_x .
	 The Permittee shall ensure that all emission monitors and recorders serving EU1, EU2 and EU3 comply with MassDEP approved performance and location specifications, and conform with the EPA monitoring specifications at 40 CFR 60.13 and 40 CFR Part 60 Appendices B and F, and all applicable portions of 40 CFR Parts 72 and 75, and 310 CMR 7.32, as applicable. The Permittee shall ensure that the subject CEMS are equipped with properly operated and
	properly maintained audible and visible alarms to activate whenever emissions from the Facility exceed the short term limits established in Table 2 of this PSD Permit. 9. The Permittee shall operate each CEMS serving EU1, EU2 and EU3 at all times except for periods of CEMS calibration checks, zero and span adjustments, preventative maintenance,
	and periods of unavoidable malfunction. 10. The Permittee shall obtain and record emissions data from each CEMS serving EU1, EU2 and EU3 for at least seventy (75) percent of each emission unit's operating hours per day, for at least seventy five (75) percent of each emission unit's operating hours per month,
	and for at least ninety five (95) percent of each emission unit's operating hours per quarter, except for periods of CEMS calibration checks, zero and span adjustments, and preventive maintenance. 11. All periods of excess emissions occurring at the Facility, even if attributable to an
	emergency/malfunction, start-up/shutdown or equipment cleaning, shall be quantified and included by the Permittee in the compilation of emissions and determination of compliance with the emission limits as stated in Table 2 of this PSD Permit. ("Excess Emissions" are defined as emissions which are in excess of the emission limits as stated in Table 2). An exceedance of emission limits in Table 2 due to an emergency or malfunction shall not be deemed a federally permitted release as that term is used in 42 U.S.C. Section 9601(10).
	12. The Permittee shall use and maintain its CEMS serving EU1, EU2 and EU3 as "direct-compliance" monitors to measure NO _x and O ₂ , "Direct-compliance" monitors generate data that legally documents the compliance status of a source.
	13. The Permittee shall develop a quality assurance/quality control (QA/QC) program for the long-term operation of the CEMS serving EU1, EU2 and EU3 so as to conform with 40 CFR Part 60 Appendices B and F, all applicable portions of 40 CFR Parts 72 and 75.
	 14. The Permittee shall install, operate, and maintain a fuel metering device and recorder for EU1, EU2 and EU3 that records natural gas consumption in standard cubic feet (scf). 15. The Permittee shall monitor fuel heat input rate (MMBtu/hr, HHV) and total fuel heat input (MMBtu) for EU1, EU2, and EU3.
	input (MMBtu) for EU1, EU2, and EU3. 16. The Permittee shall monitor each date and daily hours of operation and total hours of operation for EU1, EU2, and EU3 per month and twelve month rolling period.

	Table 3
EU#	Monitoring and Testing Requirements
	17. The Permittee shall ensure that initial compliance tests of the Facility are conducted for "hot start", "warm start", "cold start", and shutdown periods as defined in the Permittee's Application for EU1 and EU2. These compliance tests shall represent periods of operation below the MECL for EU1 and EU2. Emission data generated from this testing shall be made available for review by MassDEP prior to determining and approving the maximum allowable emission limits for all pollutants listed in Table 2 (lb per event) and opacity limits, for these periods of time 18. The Permittee shall comply with all applicable monitoring requirements of 40 CFR Part 60 Subpart KKKK.
	19. The Permittee shall monitor the natural gas consumption of EU1 and EU2 in accordance with 40 CFR Part 60 Subpart KKKK utilizing a continuous monitoring system accurate to \pm 5 percent, and as approved by MassDEP.
	20. The Permittee shall monitor the sulfur content of the natural gas combusted by EU1 and EU2 in accordance with 40 CFR Part 60 Subpart KKKK, or pursuant to any alternative fuel monitoring schedule issued in accordance with 40 CFR Part 60 Subpart KKKK.
	21. The Permittee shall install and operate continuous monitors fitted with alarms to monitor continuously the temperatures at the inlets to the SCR and oxidation catalysts serving EU1 and EU2. In addition, the Permittee shall monitor the combustion turbine inlet and ambient temperatures for EU1 and EU2.
	22. The Permittee shall monitor the load, start-up and shutdown duration, and mass emissions (lb/event) during start-up and shutdown periods of EU1 and EU2.
	23. The Permittee shall monitor the operation of EU1 and EU2 in accordance with the surrogate methodology or parametric monitoring developed during the most recent compliance test concerning PM, PM_{10} , and $PM_{2.5}$ emission limits.
	24. The Permittee shall monitor the CO_2 emissions in accordance with 40 CFR Part 75. 25. The Permittee shall monitor the Greenhouse Gas emission rate utilizing the calculation procedures in 40 CFR Part 98 Subpart A, Table A-1.
	26. The Permittee shall continuously monitor the net electrical output to the grid of the Facility.
EU3	27. The Permittee shall comply with all applicable monitoring requirements of 40 CFR Part 60 Subpart Dc.
	28. The Permittee shall comply with all applicable emissions standards, operating restrictions, and monitoring requirements of 40 CFR Part 60 Subpart IIII.
	29. The Permittee shall equip, operate, and maintain non-resettable hour meters on the emergency generator and fire pump engines in order to monitor the hours of operation of each emission unit.
	30. The Permittee shall monitor the quantity and sulfur content of ULSD fuel oil burned in EU4 and EU5.
	31. If and when MassDEP requires it, the Permittee shall conduct compliance testing in accordance with EPA Reference Test Methods.

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EPA = United States Environmental Protection Agency CFR = Code of Federal Regulations CMR = Code of Massachusetts Regulations DAHS = Data Acquisition and Handling System CEMS = Continuous Emission Monitoring System SCR = Selective Catalytic Reduction $O_2 = Oxygen$ $NO_x = Nitrogen Oxides$ PM = Particulate Matter PM_{10} = Particulate Matter less than or equal to 10 microns in size $PM_{2.5}$ = Particulate Matter less than or equal to 2.5 microns in size $CO_2 = Carbon Dioxide$ $H_2SO_4 = Sulfuric Acid$ lb = poundslb/hr = pounds per hourlb/MMBtu = pounds per million British thermal units ppmvd = parts per million by volume, dry basis lb/MW-hr = pounds per megawatt-hr net electrical output to the grid scf = standard cubic feetMMBtu/hr = million British thermal units per hour MMBtu = million British thermal units HHV = higher heating value basis MECL = Minimum Emissions Compliance Load ULSD = Ultra Low Sulfur Diesel Fuel Oil containing a maximum of 0.0015 weight percent sulfur

V. <u>RECORD KEEPING REQUIREMENTS</u>

	Table 4
EU#	Record Keeping Requirements
EU1,	1. The Permittee shall maintain records of each emission unit's hourly fuel heat input rate
EU2, EU3	(MMBtu/hr, HHV), total fuel heat input (MMBtu), and natural gas consumption (scf) per
	month and twelve month rolling period basis.
	2. The Permittee shall maintain records of each date and daily hours of operation and total
	hours of operation of each EU per month and twelve month rolling period.
	3. The Permittee shall maintain on-site permanent records of output from all continuous
	monitors (including CEMS) for flue gas emissions and natural gas consumption (scf).
EU1,	4. The Permittee shall maintain a log to record problems, upsets or failures associated with
EU2, EU3	the subject emission control systems, DAHS and CEMS serving EU1, EU2, and EU3, and
	the NH ₃ handling system serving EU1 and EU2.
	5. The Permittee shall continuously estimate and record PM, PM_{10} , and $PM_{2.5}$ emissions on the
	DAHS using the surrogate methodology or parametric monitoring derived from the most recent
	compliance test.
	6. The Permittee shall maintain records of the load, start-up and shutdown duration, and
	mass emissions (lb/event) during start-up and shutdown periods of EU1 and EU2.
	7. The Permittee shall maintain records of net electrical output to the grid from the Facility
	on a daily basis.
	8. The Permittee shall comply with all applicable record keeping requirements of 40 CFR
	Part 60 Subpart KKKK.

	Table 4
EU#	Record Keeping Requirements
EU1, EU2, EU3	9. The Permittee shall maintain records of the sulfur content of the natural gas combusted by EU1 and EU2 at the frequency required pursuant to 40 CFR Part 60 Subpart KKKK, or pursuant to any alternative fuel monitoring schedule issued in accordance with 40 CFR Part 60 Subpart KKKK.
	 10. The Permittee shall record CO₂ emissions from EU1 and EU2 in accordance with 40 CFR Part 75. 11. The Permittee shall record the Greenhouse Gas emission rate of EU1 and EU2 on a daily
	 basis utilizing the calculation procedures in 40 CFR Part 98 Subpart A, Table A-1. 12. The Permittee shall maintain continuous records of SCR and oxidation catalyst inlet temperatures, combustion turbine inlet temperatures and ambient temperatures. 13. The Permittee shall maintain the SOMP for the NH₃ handling system serving EU1 and
EU3	EU2 SCRs in a convenient location and make them readily available to all employees. 14. The Permittee shall comply with all applicable record keeping requirements of 40 CFR Part 60 Subpart Dc.
EU4, EU5	15. The Permittee shall record and post conspicuously on or near EU3 the results of annual inspections, maintenance, and testing and the date(s) upon which it was performed.16. The Permittee shall comply with all applicable record keeping requirements of 40 CFR Part
	 60 Subpart IIII. 17. The Permittee shall maintain a record of the quantity of ULSD fuel oil combusted in, and the total hours of operation of, EU4 and EU5 per month and per 12-month rolling period. 18. The Permittee shall maintain a record of the sulfur content of each ULSD fuel oil delivery made to the Facility.
Facility- Wide	19. A record keeping system for the Facility shall be established and maintained up-to-date by the Permittee such that year-to-date information is readily available. Record keeping shall, at a minimum, include:
	a) Compliance records sufficient to document actual emissions from the Facility in order to determine compliance with what is allowed by this PSD Permit. Such records shall include, but are not limited to, fuel usage rates, emissions test results, monitoring equipment data and reports;
	b) Maintenance: A record of routine maintenance activities performed on the subject emission units' control equipment and monitoring equipment at the Facility including, at a minimum, the type or a description of the maintenance performed and the date(s) and time(s) the work was commenced and completed; and,
	c) Malfunctions: A record of all malfunctions on the subject emission units' control and monitoring equipment at the Facility including, at a minimum: the date and time the malfunction occurred; a description of the malfunction and the corrective action taken; the date and time corrective actions were initiated; and the date and time corrective actions were completed.
	20. The Permittee shall maintain all records required by 40 CFR Part 98 (Mandatory Greenhouse Gas Emissions Reporting) at the Facility.

	Table 4		
EU#	Record Keeping Requirements		
	21. The Permittee shall maintain monthly records to demonstrate the Facility's compliance status regarding the Facility-Wide emission limits (in TPY) specified in Table 2. Records shall nclude actual emissions for the month as well as for the previous 11 months. (The MassDEP approved format can be downloaded at http://www.mass.gov/eea/agencies/massdep/air/approvals/limited-emissions-record-keeping-		
	 and-reporting.html#WorkbookforReportingOn-SiteRecordKeeping in Microsoft Excel format.) 22. The Permittee shall maintain a copy of this PSD Permit, underlying Application, and the most up-to-date Standard SOMP for each emission unit and PCD approved herein on-site. 23. The Permittee shall maintain records of monitoring and testing as required by Table 3. All records required by this PSD Permit shall be kept on site for five (5) years and made available for inspection by MassDEP or EPA upon request. 		

Table 4 Key:

EU# = Emission Unit Number

PSD = Prevention of Significant Deterioration

PCD = Pollution Control Device

SOMP = Standard Operating and Maintenance Procedures

EPA = United States Environmental Protection Agency

DAHS = Data Acquisition and Handling System

CEMS = Continuous Emission Monitoring System

SCR = Selective Catalytic Reduction

CFR = Code of federal Regulations

CMR = Code of Massachusetts Regulations

 $NH_3 = Ammonia$

PM = Particulate Matter

 $PM_{10} = Particulate Matter less than or equal to 10 microns in size$

 $PM_{2.5}$ = Particulate Matter less than or equal to 2.5 microns in size

 $CO_2 = Carbon Monoxide$

ULSD = Ultra Low Sulfur Diesel Fuel Oil containing a maximum of 0.0015weight percent sulfur

lb = pounds

scf = standard cubic feet

MMBtu/hr = million British thermal units per hour

MMBtu = million British thermal units

HHV = higher heating value basis

TPY = tons per 12-month rolling period

VI. <u>REPORTING REQUIREMENTS</u>

	Table 5
EU#	Reporting Requirements
	1. The Permittee must obtain written MassDEP approval of an emissions test protocol prior
EU2, EU3	to initial compliance emissions testing of EU1, EU2 and EU3 at the Facility. The protocol
	shall include a detailed description of sampling port locations, sampling equipment,
	sampling and analytical procedures, and operating conditions for any such emissions testing.
	In addition, the protocol shall include procedures for a parametric monitoring strategy to ensure continuous monitoring of PM, PM_{10} , and $PM_{2.5}$ emissions from EU1 and EU2. The
	protocol must be submitted to MassDEP at least 30 days prior to commencement of testing.
	2. The Permittee shall submit a final emissions test results report to MassDEP within 45 days
	after completion of the initial compliance emissions testing program.
	3. A QA/QC program plan for the CEMS serving EU1, EU2 and EU3 must be submitted, in
	writing, at least 30 days prior to commencement of commercial operation of the subject
	emission units. MassDEP must approve the QA/QC program prior to its implementation.
	Subsequent changes to the QA/QC program plan shall be submitted to MassDEP for
EU1,	MassDEP approval prior to their implementation.
	4. The Permittee shall submit a quarterly Excess Emissions Report to MassDEP by the thirtieth (30th) day of April, July, October, and January covering the previous calendar periods
L02, L03	of January through March, April through June, July through September, and October through
	December, respectively. The report shall contain at least the following information:
	a) The Facility CEMS excess emissions data, in a format acceptable to MassDEP.
	b) For each period of all excess emissions or excursions from allowable operating conditions
	for the emission unit(s), the Permittee shall list the duration, cause, the response taken, and
	the amount of excess emissions. Periods of excess emissions shall include periods of start-
	up, shutdown, malfunction, emergency, equipment cleaning, and upsets or failures associated
	with the emission control system or CEMS. ("Malfunction" means any sudden and
	unavoidable failure of air pollution control equipment or process equipment or of a process to
	operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation, or any other preventable upset condition or preventable
	equipment breakdown shall not be considered malfunctions. "Emergency" means any situation
	arising from sudden and reasonably unforeseeable events beyond the control of this 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
	PSD 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 these things.)
	accision to keep operating despite knowledge of these timigs.)
	c) A tabulation of periods of operation (including dispatch) of each emission unit and total
	hours of operation of each emission unit during the calendar quarter.

	Table 5		
EU#	Reporting Requirements		
EU1,EU2	 5. After completion of the initial compliance emissions testing program, the Permittee shall submit information for MassDEP review that documents the actual emissions impacts generated by EU1 and EU2 during start-up and shutdown periods versus any applicable NAAQS and SILs or the AALs and TELs for air toxics. This information shall be submitted to MassDEP as part of the final emissions test results report. 6. The Permittee shall comply with all applicable reporting requirements of 40 CFR Part 60 Subpart KKKK. 		
	7. The Permittee shall submit to MassDEP a Phase II Acid Rain Permit Application at least 24 months prior to commencement of commercial operation of any subject emission unit.		
EU3	8. The Permittee shall comply with all applicable reporting requirements of 40 CFR Part 60 Subpart Dc.		
EU4, EU5	9. The Permittee shall comply with all applicable reporting requirements of 40 CFR Part 60 Subpart IIII.		
Facility- Wide	 10. The Permittee shall submit, in writing, the following notifications to MassDEP within fourteen (14) days after each occurrence: a) date of commencement of construction of each subject emission unit at the Facility; b) date when construction has been completed of each subject emission unit at the Facility; c) date of initial firing of each subject emission unit at the Facility; d) date when each subject emission unit at the Facility is either ready for commercial operation or has commenced commercial operation. 11. The Permittee shall submit to MassDEP an Operating Permit, no later than 12 months 		
	after commencement of commercial operation of the Facility in accordance with 40 CFR Part 70.		
	12. If the Facility is subject to 40 CFR Part 68, due to the presence of a regulated substance above a threshold quantity in a process, the Permittee must submit a Risk Management Plan no later than the date the regulated substance is first present above a threshold quantity.		
	13. The Permittee shall report to EPA in accordance with 40 CFR Part 75.14. The Permittee shall comply with all applicable reporting requirements of 40 CFR Part 98 (Mandatory Greenhouse Gas Emissions Reporting).		
	15. The Permittee must notify MassDEP by telephone or fax or e-mail [nero.air@massmail.state.ma.us] as soon as possible, but in any case no later than three (3) business days after the occurrence of any upsets or malfunctions to the Facility equipment, air pollution control equipment, or monitoring equipment which result in an excess emission to the air and/or a condition of air pollution.		

	Table 5		
	Reporting Requirements		
Facility- Wide	16. The Permittee shall submit a semi-annual report to MassDEP by July 30 and January 30 of each year to demonstrate the Facility's compliance status regarding the Facility-Wide emission limits (in TPY) specified in Table 2. Reports shall include actual emissions for the previous 12 months. (The MassDEP approved format can be downloaded at http://www.mass.gov/eea/agencies/massdep/air/approvals/limited-emissions-record-keeping-and-reporting.html#WorkbookforReportingOn-SiteRecordKeeping in Microsoft Excel format.)		
	 17. The Permittee shall submit to MassDEP a SOMP for the subject emission units and associated control and monitoring/recording systems at the Facility no later than 30 days prior to commencement of commercial operation of the unit. Thereafter, the Permittee shall submit updated versions of the SOMP to MassDEP no later than thirty (30) days prior to the occurrence of a significant change. MassDEP must approve of significant changes to the SOMP prior to the SOMP becoming effective. The updated SOMP shall supersede prior versions of the SOMP. 18. The Permittee shall submit to MassDEP all information required by this PSD Permit over the signature of a "Responsible Official". 19. All notifications and reporting to MassDEP required by this PSD Permit shall be made to the attention of: 		
	 Department of Environmental Protection/Bureau of Waste Prevention 205B Lowell Street Wilmington, Massachusetts 01887 Attn: Permit Chief Phone: (978) 694-3200 Fax: (978) 694-3499 E-Mail: nero.air@massmail.state.ma.us 20. The Permittee shall provide a copy to MassDEP of any record required to be maintained by this PSD Permit within thirty (30) days from MassDEP's written request. 21. If and when MassDEP requires additional compliance testing, the Permittee shall submit to MassDEP for approval a stack emission pretest protocol, at least thirty (30) days prior to emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements. 22. If and when MassDEP requires additional compliance testing, the Permittee shall submit to MassDEP a final stack emission test results report, within forty five (45) days after emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements. 		

Table 5 Key:

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EPA = United States Environmental Protection Agency CEMS = Continuous Emission Monitoring System DAHS = Data Acquisition and Handling System CFR = Code of Federal Regulations CMR = Code of Massachusetts Regulations M.G.L. = Massachusetts General Laws SOMP = Standard Operating and Maintenance Procedures QA/QC = Quality Assurance/Quality Control CTG = Combustion Turbine Generator SCR = Selective Catalytic Reduction TPY = tons per 12 month rolling period $NO_x = Oxides$ of Nitrogen $NH_3 = Ammonia$ PM = Particulate Matter PM_{10} = Particulate Matter less than or equal to 10 microns in size $PM_{2.5}$ = Particulate Matter less than or equal to 2.5 microns in size NAAQS = National Ambient Air Quality Standards SILs = Significant Impact Levels AAL = Allowable Ambient Limit TEL = Threshold Effects Exposure Limit

VII. SPECIAL TERMS AND CONDITIONS

Table 6		
Special Terms and Conditions		
1. The Permittee shall not allow the combustion turbines at the Facility to operate below the		
MECL, except for start-ups and shutdowns. Emissions during start-ups and shutdowns shall		
be included in the TPY limits specified in Table 2.		
2. The Permittee shall ensure that the SCR control equipment serving EU1 and EU2 is		
operational whenever the turbine exhaust temperature at the SCR unit attains the minimum		
exhaust temperature specified by the SCR vendor and other system parameters are satisfied		
for SCR operation. The specific load at which this exhaust temperature and other system		
parameters are achieved will vary based on ambient conditions and whether the start-up is		
cold, warm, or hot.		
3. The Permittee shall develop as part of the Standard Operating Procedures for EU1, EU2,		
and EU3, an MECL optimization protocol to establish minimum operating load(s) that		
maintain compliance with all emission limitations at various ambient temperatures and		
conditions for each respective emission unit.		
4. The Permittee shall maintain an adequate supply of spare parts on-site to maintain the on-		
line availability and data capture requirements for the CEMS equipment serving the		
Facility.		
5. The Permittee shall properly train all personnel to operate the Facility and the control and		
monitoring equipment serving the Facility in accordance with vendor specifications. All		
persons responsible for the operation of the Facility shall sign a statement affirming that		
they have read and understand the approved SOMP. Refresher training shall be given by the		
Permittee to Facility personnel at least once annually.		
6. The Permittee shall comply with all provisions of 40 CFR Parts 72 and 75, 40 CFR Part		
60, 40 CFR Part 63, 40 CFR Part 64, 40 CFR Part 68 and 40 CFR Part 98.		

Table 6		
EU#	Special Terms and Conditions	
	7. The Permittee shall comply with all applicable portions of Section 112(r) of the Clean Air	
	Act and associated regulations at 40 CFR Part 68.	

Table 6 Key:

EU# = Emission Unit Number

CFR = Code of federal regulations

CMR = Code of Massachusetts Regulations

SOMP = Standard Operating and Maintenance Procedures

CEMS = Continuous Emission Monitoring System

SCR = Selective Catalytic Reduction

TPY = tons per 12 month rolling period

MECL = Minimum Emissions Compliance Load

VIII. <u>RIGHT OF ENTRY</u>

The Permittee shall allow all authorized representatives of MassDEP and/or EPA, upon presentation of credentials, to enter upon or through the Facility where records required under this PSD Permit are kept. The Permittee shall allow such authorized representatives, at reasonable times:

1. To access and copy any records that must be kept under this PSD Permit;

2. To inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this PSD Permit; and

3. To monitor substances or parameters for purposes of assuring compliance with this PSD Permit.

IX. TRANSFER OF OWNERSHIP

In the event of any changes in control or ownership of the Facility, this PSD Permit shall be binding on all subsequent owners and operators. The Permittee shall notify the succeeding owner and operator of the existence of this PSD Permit and its conditions before such change, if possible, but in no case later than 14 days after such change. Notification shall be sent by letter with a copy forwarded within 5 days to MassDEP and EPA.

X. <u>SEVERABILITY</u>

The provisions of this PSD Permit are severable, and if any provision of the PSD Permit is held invalid, the remainder of this PSD Permit will not be affected thereby.

XI. <u>CREDIBLE EVIDENCE</u>

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any provision of this PSD Permit, the methods used in this PSD Permit shall be used, as applicable. However, nothing in this PSD Permit shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether the Permittee would have been in compliance with applicable requirements if the appropriate performance or compliance test procedures or methods had been performed.

XII. OTHER APPLICABLE REGULATIONS

The Permittee shall operate all equipment regulated herein in compliance with all other applicable provisions of federal and state air regulations.

XIII. <u>AGENCY ADDRESSES</u>

Subject to change, all correspondence required by this PSD Permit shall be forwarded to:

Permit Chief, Bureau of Waste Prevention The Department of Environmental Protection (MassDEP) Northeast Regional Office 205B Lowell Street Wilmington, Massachusetts 01887

XIV. APPEAL PROCEDURES

- 1. Within 30 days after the final PSD Permit decision has been issued under 40 CFR 124.15, any person who filed comments on the Draft Permit or participated in any public hearing may petition EPA's Environmental Appeals Board to review any condition of the Permit decision.
- 2. The effective date of the Permit is 30 days after service of notice to the Applicant and commenters of the final decision to issue, modify, or revoke and reissue the PSD Permit, unless review is requested on the Permit under 40 CFR 124.19 within the 30 day period.
- 3. If an appeal is made to the EAB, the effective date of the Permit is suspended until the appeal is resolved.