

Department of Environmental Protection

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

Charles D. Baker Governor

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FINAL AIR QUALITY OPERATING PERMIT

Issued by the Massachusetts Department of Environmental Protection ("Department" or "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"]:

Dighton Power, LLC 1450 Somerset Avenue Dighton, Massachusetts 02715

FACILITY LOCATION:

Dighton Power, LLC 1450 Somerset Avenue Dighton, Massachusetts 02715

NATURE OF BUSINESS:

Electric Power Generation

RESPONSIBLE OFFICIAL:

Name: Michael Joyce Title: Managing Director

INFORMATION RELIED UPON:

Application No. SE-14-006 Transmittal No. X259349

FACILITY IDENTIFYING NUMBERS:

AQ ID: 1200276 FMF FAC NO.: 281655 FMF RO NO.: 281656

Standard Industrial Classification (SIC): 4911 North American Industrial Classification System (NAICS): 221112

FACILITY CONTACT PERSON:

Name:Michael JoyceTitle:Managing DirectorPhone:(508) 669-5300Email:michael.joyce@dynegy.com

This Operating Permit shall expire on

1/23/2023

For the Department of Environmental Protection 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.

1/23/2018

This information is available in alternate format. Contact Michelle Waters-Ekanem, Director of Diversity/Civil Rights at 617-292-5751. TTY# MassRelay Service 1-800-439-2370 MassDEP Website: www.mass.gov/dep

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Date

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SPECIAL CONDITIONS FOR OPERATING PERMIT

1. <u>PERMITTED ACTIVITIES</u>

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.

A. DESCRIPTION OF FACILITY AND OPERATIONS

Dighton Power, LLC ("The Facility") is an electric power generation facility located at 1450 Somerset Avenue, Dighton, Massachusetts. The Facility began operations in 1999. The Facility site consists of approximately 17.5 acres of industrially zoned land situated off Somerset Avenue. As defined in 310 CMR 7.00: Appendix C, the Facility is a major source of Nitrogen Oxides (NO_x). The Facility's emission units (EU's) have potential NO_x emission greater than the Major Source threshold (50 tons per year for NO_x). The Facility is not a major source of hazardous air pollutants (HAP).

Dighton Power, LLC operates an Alstom Power Model 11N2 combined-cycle combustion turbine (EU-1) that is fired on natural gas as its only fuel. The unit has a nominal capacity of 180 MW and a maximum heat input rating of approximately 1,423.08 million British Thermal Unit per hour (MMBtu/hr). The hot exhaust gases exiting the turbine pass through a heat recovery steam generator (HRSG), which uses the heat from these gases to produce steam. There is no supplemental fuel firing in the HRSG. The HRSG houses an oxidation catalyst followed by an ammonia (NH₃) injection grid and a selective catalytic reduction (SCR) catalyst. These catalysts control emissions of carbon monoxide (CO) and NO_x. The exhaust gases, after passing through the HRSG, are vented to atmosphere via a 150-foot stack equipped with a continuous emission monitoring system (CEMS) for measuring NO_x , CO, O_2 and NH_3 . EU-1 is subject to the 40 CFR Part 60 Subpart GG, Standards of Performance for Stationary Gas Turbines. The second emission unit (EU-2) is an emergency diesel fire pump, Cummins Model No. 6BTA5.9-F1 engine. The engine has a maximum heat input rating of 1.5 MMBtu/hr and 183 horsepower (HP). This unit is restricted to 300 hours of operation per 12-month rolling period. EU-2 is subject to the 40 CFR Part 63 Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

The Facility conducts cleaning operations in its maintenance shop (previously identified in Operating Permit No. 4V07027 as EU-3). The Facility is no longer utilizing a cleaning solution that contains Volatile Organic Compound (VOC). The Safety Data Sheet (SDS) for the cleaning solution indicates that it is water soluble and does not contain any organic material; therefore it is exempt from any requirements under 310 CMR 7.18(8)(d) <u>Aqueous Cleaning</u>. As the unit is not subject to any other requirements of 310 CMR 7.00 Appendix C; it is no longer considered an Emission Unit and any past associated requirements have been removed from this Operating Permit.

On July 13, 2015, MassDEP issued an Air Quality Plan Approval No. SE-15-012, which superseded Plan Approval No. 4B02019 issued on July 19, 2002. The Plan Approval addressed changes to past approved regulatory requirements, which included, but was not limited to the removal of an annual VOC stack test requirement, correcting obsolete regulatory language references and establishing emission limits for non-typical short duration operating scenarios, such as, combustion turbine protective load shedding, re-commissioning and tuning at the Facility.

On April 6, 2017, MassDEP issued Plan Approval No. SE-17-004, which superseded Plan Approval No. SE-15-012 issued on July 13, 2015. The Plan Approval addressed changes to CEMS data capture requirements. The changes associated with the Plan Approval No. SE-17-004 are incorporated into this Operating Permit.

As a combined-cycle power generation facility, Dighton Power, LLC includes a full complement of support equipment and systems for the production of electricity. Principal support equipment and systems include:

- Electric generator
- Steam turbine
- Small 2-cell wet surface air condenser
- Lube oil/crankcase oil systems/tanks and various other tanks
- Boiler makeup water/steam chemical treatment/cooling water treatment
- Miscellaneous minor activities involving oils, lubricants, and solvents

The Facility also maintains a list of exempt activities as indicated in Section 3 Table 2. The Facility has the capability to operate continuously (24 hours per day and 7 days per week) except for servicing, maintenance and repair activities.

The Facility is subject to the requirements of Greenhouse Gas Emissions Reporting as defined by MassDEP in 310 CMR 7.71(3)(a).

Massachusetts CO₂ Budget Trading Program

The Permittee is subject to the requirements of the Massachusetts CO_2 Budget Trading Program for EU-1 as defined by MassDEP in 310 CMR 7.70(1)(d).

Pursuant to 310 CMR 7.70(3), the Permittee was issued a CO₂ Budget Program Emissions Control Plan (ECP) on December 28, 2008 (Approval No. 4B08036). In accordance with 310 CMR 7.70(8), the owner or operator shall install, maintain, operate, and report emissions data from a CO₂ emissions monitoring system. (State Only Requirement)

Federal Acid Rain Program

The Permittee is subject to the requirements of Phase II of the Federal Acid Rain Program for EU-1 as defined by EPA in 40 CFR Part 72 and 40 CFR Part 75.

Pursuant to 40 CFR Part 72.71, 40 CFR Part 72.73, and 310 CMR 7.00: Appendix C(3)(n), MassDEP is the permitting authority for Phase II Acid Rain Permits. The Permittee was issued the initial Phase II Acid Rain Permit on December 28, 1999 (Permit No. 4B97112)].

In accordance with 40 CFR 72.9 the owner or operator of an acid rain unit shall install, maintain, and operate an EPA approved monitoring system for monitoring NO_x , SO_2 and CO_2 emissions in accordance with 40 CFR 75.

The Department is incorporating the requirements of the renewal Phase II Acid Rain Permit into this Operating Permit. The Phase II Acid Rain requirements will renew in the Operating Permit.

Compliance Assurance Monitoring

As part of this operating permit renewal application, a compliance assurance monitoring (CAM) applicability determination was conducted. In accordance with 40 CFR Part 64.2, Compliance Assurance Monitoring (CAM) does not apply to the facility as the Facility utilizes a continuous compliance determination method (NO_x/CO CEMS), as defined in 40 CFR 64.1.

Operating Permit Requirements

Operating Permit Section 4, Tables 3, 4, 5, and 6 list the facility emissions limits along with monitoring, testing, recordkeeping and reporting requirements. Operating Permit Section 4, Table 7 lists regulations that are not applicable to the Facility at this time.

2. <u>EMISSION UNIT IDENTIFICATION</u>

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

	Table 1						
EU	Description of EU	EU Design Capacity	Pollution Control Device (PCD)				
EU-1	Combined-Cycle Combustion Turbine Alstom Power, Model No. GT11N2 (to Stack No. 1)	Max. heat rate input 1,423,080,000 Btu/hr	Selective Catalytic Reduction (SCR) and CO Catalysts Manufacturers: Mitsubishi and BASF				
EU-2	Emergency Diesel Fire Pump Cummins Model No. 6BTA5.9-F1 (to Stack No. 2)	<u>Max. heat rate input</u> 1,500,000 Btu/hr	Exhaust silencer				

Table 1 Key:

EU	= Emission Unit	CO	= Carbon Monoxide
No.	= Number	<	= less than
Btu	= British thermal unit	/	= per
PCD	= Pollution Control Device	Max.	= maximum
hr	= hour		

3. <u>IDENTIFICATION OF EXEMPT ACTIVITIES</u>

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

Table 2	
Description of Current Exempt Activities	Reason
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 shall be kept on-site at the facility and a copy shall be submitted to the MassDEP's Southeast 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)

Table 2 Key:

MassDEP	= Massachusetts Department of Environmental Protection
CMR	= Code of Massachusetts Regulations

4. <u>APPLICABLE REQUIREMENTS</u>

A. OPERATIONAL AND/OR PRODUCTION EMISSION LIMITS AND RESTRICTIONS

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

	Table 3						
EU	Fuel/ Raw Material	Pollutant	Operational and/or Production Limits	Emissions Limits/Standards ⁽¹⁶⁾	Applicable Regulation and/or Approval No.		
			100%, 75% and 50% Load	0.0023 lb/MMBtu (heat input, HHV) 0.45 ppmvd @ 15% O ₂			
EU-1	Natural Gas	SO ₂ ⁽¹⁾	100% Load ⁽⁶⁾	13.4 tons/yr ⁽¹⁾ <u>lb/hr (by temperature)</u> ⁽⁵⁾ 3.27 (20°F) 3.05 (50°F) 2.74 (90°F)	SE-17-004		

	Table 3 (continued)						
EU	Fuel/ Raw Material	Pollutant	Operational and/or Production Limits	Emissions Limits/Standards ⁽¹⁶⁾	Applicable Regulation and/or Approval No.		
			75% Load ⁽⁷⁾	11.6 tons/yr <u>lb/hr (by temperature)</u> ⁽⁵⁾ 2.65 (20°F) 2.49 (50°F) 2.24 (90°F)			
EU-1	Natural Gas	SO ₂ ⁽¹⁾	50% Load ⁽⁸⁾	9.3 tons/yr <u>lb/hr (by temperature)</u> ⁽⁵⁾ 2.12 (20°F) 1.97 (50°F) 1.71 (90°F)	SE-17-004		
			Startup, shutdown, re- commissioning, protective load shedding and other tuning periods ⁽⁹⁾⁽¹⁰⁾	0.0023 lb/MMBtu (heat input, HHV) 0.45 ppmvd @ 15% O ₂ 3.27 lb/hr			
			Not to exceed 1	2 lb/MMBtu, annual calendar average	310 CMR 7.22		
		Sulfur in fuel	\leq 0.8% by weight (8,000 ppmw)		40 CFR Part 60, Subpart GG, §60.333(b)		
			100%, 75% and 50% Load	0.0088 lb/MMBtu (heat input, HHV)			
			Max. allowable	74.5 tons/yr ⁽²⁾			
		PM ⁽²⁾	100% Load ⁽⁶⁾	51.2 tons/yr <u>lb/hr (by temperature)</u> ⁽⁵⁾ 12.50 (20°F) 11.7 (50°F) 10.5 (90°F)	SE-17-004		

Table 3 (continued)						
EU	Fuel/ Raw Material	Pollutant	Operational and/or Production Limits	Emissions Limits/Standards ⁽¹⁶⁾	Applicable Regulation and/or Approval No.	
			75% Load ⁽⁷⁾	44.3 tons/yr <u>lb/hr (by temperature)</u> ⁽⁵⁾ 10.1 (20°F) 9.5 (50°F) 8.6 (90°F)		
EU-1	Natural Gas	PM ⁽²⁾	50% Load ⁽⁸⁾	35.5 tons/yr <u>lb/hr (by temperature)</u> ⁽⁵⁾ 8.1 (20°F) 7.6 (50°F) 6.6 (90°F)	SE-17-004	
			Startup, shutdown, re- commissioning, protective load shedding and other tuning periods ⁽⁹⁾⁽¹⁰⁾	0.05 lb/MMBtu (heat input, HHV) 17.0 lb/hr		
			100%, 75% and 50% Load	0.0129 lb/MMBtu (HHV) 3.50 ppmvd @ 15% O ₂		
			100% Load ⁽⁶⁾	75.0 tons/yr ⁽¹⁾ <u>lb/hr (by temperature)</u> ⁽⁵⁾ 18.36 (20°F) 17.12 (50°F) 15.37 (90°F)		
		NO _x ⁽¹⁾	75% Load ⁽⁷⁾	65.0 tons/yr <u>lb/hr (by temperature)</u> ⁽⁵⁾ 14.84 (20°F) 13.95 (50°F) 12.55 (90°F)		
			50% Load ⁽⁸⁾	52.0 tons/yr <u>lb/hr (by temperature)</u> ⁽⁵⁾ 11.87 (20°F) 11.07 (50°F) 9.61 (90°F)		

Table 3 (continued)							
EU	Fuel/ Raw Material	Pollutant	Operational and/or Production Limits	Emissions Limits/Standards ⁽¹⁶⁾	Applicable Regulation and/or Approval No.		
		NO _x ⁽¹⁾	Startup, shutdown, re- commissioning, protective load shedding and other tuning periods ⁽⁹⁾⁽¹⁰⁾	0.74 lb/MMBtu (heat input, HHV) 200.00 ppmvd @ 15% O ₂ 262.0 lb/hr	SE-17-004		
			4	75 ppm @ 15% $O_{2,}$ 4-hour rolling average ⁽¹¹⁾	40 CFR Part 60, Subpart GG, §60.332		
			Max. allowable	68.0 tons/yr ⁽³⁾			
EU-1	Natural Gas		100% Load ⁽⁶⁾	26.2 tons/yr 0.0045 lb/MMBtu (heat input, HHV) 2.00 ppmvd @ 15% O ₂ <u>lb/hr (by temperature)⁽⁵⁾</u> 6.40 (20°F) 5.97 (50°F) 5.36 (90°F)			
		CO ⁽³⁾	75% Load ⁽⁷⁾	68.0 tons/yr 0.0135 lb/MMBtu (heat input, HHV) 6.00 ppmvd @ 15% O ₂ <u>lb/hr (by temperature)⁽⁵⁾</u> 15.53 (20°F) 14.60 (50°F) 13.14 (90°F)	SE-17-004		
			50% Load ⁽⁸⁾	54.4 tons/yr 0.0135 lb/MMBtu (heat input, HHV) 6.00 ppmvd @ 15% O ₂ <u>lb/hr (by temperature)⁽⁵⁾</u> 12.42 (20°F) 11.58 (50°F) 10.06 (90°F)			

	Table 3 (continued)						
EU	Fuel/ Raw Material	Pollutant	Operational and/or Production Limits	Emissions Limits/Standards ⁽¹⁶⁾	Applicable Regulation and/or Approval No.		
		N/A	Sulf 0.8 grain	ur content shall not exceed s per 100 cubic foot (gr/100 ft ³)			
EU-1	Natural		1 st 120 minutes of a cold start, re- commissioning, protective load shedding and other tuning periods ⁽⁹⁾⁽¹⁰⁾	0.336 lb/MMBtu (heat input, HHV) 150.0 ppmvd @ 15% O ₂ 232.0 lb/hr	SE-17-004		
Gas	Gas	CO ⁽³⁾	1 st 60 minutes of a hot start (9)(10)	0.112 lb/MMBtu (heat input, HHV) 50.0 ppmvd @ 15% O ₂ 58.2 lb/hr			
			All other startup operation ⁽⁹⁾⁽¹⁰⁾	0.045 lb/MMBtu (heat input, HHV) 20.0 ppmvd @ 15% O ₂ 43.2 lb/hr			
			All shutdown operation ⁽⁹⁾⁽¹⁰⁾	0.045 lb/MMBtu (heat input, HHV) 20.0 ppmvd @ 15% O ₂ 23.4 lb/hr			
			Max. allowable	38.8 tons/yr ⁽²⁾			
		VOC ⁽²⁾	100% Load ⁽⁶⁾	22.3 tons/yr 0.00384 lb/MMBtu (heat input, HHV) 3.00 ppmvd @ 15% O ₂ <u>lb/hr (by temperature)⁽⁵⁾ 5.46 (20°F) 5.10 (50°F) 4.57 (90°F)</u>			

Table 3 (continued)						
EU	Fuel/ Raw Material	Pollutant	Operational and/or Production Limits	Emissions Limits/Standards ⁽¹⁶⁾	Applicable Regulation and/or Approval No.	
EU-1	Natural Gas		75% Load ⁽⁷⁾	19.3 tons/yr 0.00384 lb/MMBtu (heat input, HHV) 3.00 ppmvd @ 15% O ₂ <u>lb/hr (by temperature)⁽⁵⁾</u> 4.42 (20°F) 4.15 (50°F) 3.74 (90°F)		
		VOC ⁽²⁾	50% Load ⁽⁸⁾	15.5 tons/yr 0.00384 lb/MMBtu (heat input, HHV) 3.00 ppmvd @ 15% O ₂ <u>lb/hr (by temperature)⁽⁵⁾</u> 3.53 (20°F) 3.29 (50°F) 2.86 (90°F)		
			Startup, shutdown, re- commissioning, protective load shedding and other tuning periods ⁽⁹⁾⁽¹⁰⁾	0.026 lb/MMBtu (heat input, HHV) 20.0 ppmvd @ 15% O ₂ 8.85 lb/hr	SE-17-004	
		хиц (1)(4)	100% Load ⁽⁶⁾	79.1 tons/yr ⁽¹⁾⁽⁴⁾ 0.0136 lb/MMBtu (heat input, HHV) 10.0 ppmvd @ 15% O ₂ <u>lb/hr (by temperature)⁽⁵⁾</u> 19.35 (20°F) 18.05 (50°F) 16.20 (90°F)		
		NH ₃ ⁽¹⁾⁽⁴⁾	75% Load ⁽⁷⁾	68.5 tons/yr 0.0136 lb/MMBtu (heat input, HHV) 10.0 ppmvd @ 15% O ₂ <u>lb/hr (by temperature)⁽⁵⁾</u> 15.64 (20°F) 14.71 (50°F) 13.24 (90°F)		

Table 3 (continued)						
EU	Fuel/ Raw Material	Pollutant	Operational and/or Production Limits	Emissions Limits/Standards ⁽¹⁶⁾	Applicable Regulation and/or Approval No.	
EU-1	Natural Gas	NH3 ⁽¹⁾⁽⁴⁾	50% Load ⁽⁸⁾	54.8 tons/yr 0.0136 lb/MMBtu (heat input, HHV) 10.0 ppmvd @ 15% O ₂ <u>lb/hr (by temperature)⁽⁵⁾</u> 12.51 (20°F) 11.67 (50°F) 10.13 (90°F)	SE-17-004	
			Startup, shutdown, re- commissioning, protective load shedding and other tuning periods ⁽⁹⁾⁽¹⁰⁾	0.0136 lb/MMBtu (heat input, HHV) 10.0 ppmvd @ 15% O ₂ 15.6 lb/hr		
		Opacity	All	No greater than 10%		
		$\rm CO_2$	The Permittee sha account in an a	all hold CO_2 allowances in a compliance amount not less than the CO_2 Budget Emissions Limitation.	310 CMR 7.70(1)(e)3 (State Only Requirement)	
		SO ₂	The Permitted allowance tr compliance a emissions of So comply with	shall hold SO_2 allowances, as of the ransfer deadline, in the Permittee's ccount not less than the total annual O_2 for the previous calendar year; and the applicable Acid Rain emissions limitations for SO_2 .	310 CMR 7.00: Appendix C(3)(n) 40 CFR 72.9 4B97112	
		N/A	ULSD Sulfur c 0.0	shall be the only fuel burned. content in fuel shall not exceed 015% by weight (15 ppm)		
EU-2	Ultra Low Sulfur Diesel	SO ₂	1.5 MMBtu/hr Max. allowable	0.0005 tons/yr ⁽¹²⁾ 0.002 lb/MMBtu (heat input, HHV) 0.003 lb/hr	SE-17-004	
	(ULSD)	РМ	hours of operation shall not exceed 300 hours per year	0.07 tons/yr ⁽¹²⁾ 0.310 lb/MMBtu (heat input, HHV) 0.47 lb/hr		

	Table 3 (continued)						
EU	Fuel/ Raw Material	Pollutant	Operational and/or Production Limits	Emissions Limits/Standards ⁽¹⁶⁾	Applicable Regulation and/or Approval No.		
EU-2		NO _x	1.5 MMBtu/hr	0.99 tons/yr ⁽¹²⁾ 4.410 lb/MMBtu (heat input, HHV) 6.62 lb/hr	SE-17-004		
	Ultra Low Sulfur Diesel	СО	Max. allowable hours of operation shall not exceed 300	0.21 tons/yr ⁽¹²⁾ 0.950 lb/MMBtu (heat input, HHV) 1.43 lb/hr			
		VOC	hours per year	0.08 tons/yr ⁽¹²⁾ 0.360 lb/MMBtu (heat input, HHV) 0.54 lb/hr			
		SO_2	See Table 3 Notes 1, 2, 3, 4, and 14	13.4 tons/yr			
		PM		75.5 tons/yr		_	
		NO _x		76.0 tons/yr	SE-17-004		
		СО		68.2 tons/yr			
		VOC		40.9 tons/yr			
-		NH ₃		79.1 tons/yr			
Facility- wide ⁽¹⁴⁾	All Fuels	Smoke	N/A	< No. 1 of Chart ⁽¹³⁾ , except \ge No. 1 to < No. 2 of Chart for \le 6 minutes during any one hour, no time to equal or exceed No. 2 of the Chart	310 CMR 7.06(1)(a)		
		Opacity		\leq 20% except > 20% to \leq 40% for \leq 2 minutes during any one hour	310 CMR 7.06(1)(b)		
		Greenl	nouse Gas ⁽¹⁵⁾	N/A	310 CMR 7.71 (State Only Requirement)		

Table 3 Key:

EU	= Emission Unit	No.	= Number
SO ₂	= Sulfur Dioxide	PM	= Particulate Matter
NO _x	= Nitrogen Oxides	CO	= Carbon Monoxide
VOC	= Volatile Organic Compounds	NH ₃	= Ammonia
N/A	= Not Applicable	HHV	= Higher Heating Value
lb/MMBtu	= pounds per Million British thermal units	lb/hr	= pounds per hour
CMR	= Codes of Massachusetts Regulations	%	= percent
/	= per	GHG	= greenhouse gas

Table 3 Key (continued):

°F	= degrees Fahrenheit	ş	= section
<	= less than	\geq	= greater than or equal to
\leq	= less than or equal to	ppmw	= parts per million by weight
CO ₂	= Carbon Dioxide	ppm	= parts per million
MMBtu/hr	= Million British thermal units per hour		
Department	= Massachusetts Department of Environmental Protection		
ppmvd @ 15% O ₂	= parts per million by volume dry corrected to 15 percent C	Dxygen	
tons/yr	= tons per consecutive 12-month period (i.e. a "tons per rol	ling 12-m	onth period")

Table 3 Notes:

- 1. Combustion turbine potential emissions for NO_x , SO_2 and NH_3 are based on an ambient temperature of 50°F at 100% load firing natural gas 8,760 hour per year.
- 2. Combustion turbine potential emissions for PM and VOC are conservatively based on maximum permitted rate during startup, shutdown, re-commissioning, protective load shedding or tuneup periods, which are defined herein (see Note 9 and 10 below).
- 3. Combustion turbine potential emissions for CO are based on an ambient temperature of 20°F at 75% load firing natural gas 8,760 hour per year.
- 4. Potential emissions for ammonia (NH₃) are based on 10.0 ppmvd NH₃ slip, corrected to 15% O₂ and includes working and breathing losses from NH₃ storage and handling operations.
- 5. The emission limit at intermediate ambient temperatures (between 20°F and 90°F) and intermediate load (between 50% and 100%) is determined by linear interpolation between adjacent data points.
- 6. **100% Load**: Potential ton/year emissions are based on 8,760 hours of operation at **100%** load at **50°F** ambient temperature for maximum heat rate inputs of 1,327.5 MMBtu/hr and 11,628,900 MMBtu/year.
- 7. **75% Load**: Potential ton/year emissions are based on 8,760 hours of operation at **75%** load at **20°F** ambient temperature for maximum heat rate inputs of 1,150.35 MMBtu/hr and 10,077,066 MMBtu/year.
- 8. **50% Load**: Potential ton/year emissions are based on 8,760 hours of operation at **50%** load at **20°F** ambient temperature for maximum heat rate inputs of 921.8 MMBtu/hr and 8,074,968 MMBtu/year.
- 9. The combustion turbine shall operate at less than 50% power <u>only</u> during startup, shutdown, re-commissioning, protective load shedding or other tuning periods, as specified below. The SCR/CO control equipment shall be operational whenever the combustion turbine is operated at 50% power or greater.

<u>Hot start</u>: Operation not to exceed 90 minutes (1.5 hours). May be extended ≤ 60 minutes in the event the steam turbine is not ready to accept additional steam flow

Cold start: Operation not to exceed 240 minutes (4.0 hours)

Shutdown: Operation not to exceed 90 minutes (1.5 hours)

Re-commissioning: Operation not to exceed 1,800 minutes (30.0 hours)

Protective load shedding: Operation not to exceed 240 minutes (4.0 hours)

Other tuning: Operation not to exceed 240 minutes (4.0 hours)

The above startup, shutdown, re-commissioning, protective load shed, and other tuning short-term emission limits (lb/hr, lb/MMBtu and ppmvd) are based on one (1) hour block average. Time periods represent elapsed time (i.e. regardless of clock time, from flame ignition: Hour No. 1 is reckoned from the first minute to the 60th consecutive minute; Hour No. 2 from the 61st minute to the 120th consecutive minute, etc.). During periods of re-commissioning, protective load shedding or other tuning reasonable attempts will be made to limit the amount of emissions.

Table 3 Notes (continued):

10. <u>Hot start</u>: Maximum duration of time to achieve emissions compliance representative of steady-state operation (at emission rates not to exceed those listed in Table 3 of Operating Permit No. SE-14-006) at nominal 50% load with the turbine having been offline for a period of 24 hours or less.

<u>Cold start</u>: Maximum duration of time to achieve emissions compliance representative of steady-state operation (at emission rates not to exceed those listed in Table 3 of Operating Permit No. SE-14-006) at nominal 50% load with the turbine having been offline for a period greater than 24 hours. If the turbine has had less than 120 minutes (2.0 hours) of flame time in the 24 hours preceding a start, the start shall be considered a cold start.

Shutdown: Maximum duration of time from emissions compliance representative of steady-state operation (at emission rates not to exceed those listed in Table 3 of Operating Permit No. SE-14-006) at nominal 50% load to a "no flame" condition.

<u>Re-commissioning</u>: The period required to complete the manufacturer's recommended equipment tuning following the completion of a major inspection. The maximum duration that EU-1 may operate below 50% power output or above "normal" emission limits (as specified in Table 3 of Operating Permit No. SE-14-006) during a "re-commissioning" event is 1,800 minutes (30.0 hours), where "normal" refers to EU-1 100%, 75% and 50% load limits.

Protective load shedding: An event during which EU-1 reduces load to less than 50% power output without stopping the combustion process to protect the turbine. The maximum duration that EU-1 may operate below 50% power output or above "normal" emission limits (as specified in Table 3 of Operating Permit No. SE-14-006) during a "protective load shedding" event is limited to 240 minutes (4.0 hours)), where "normal" refers to EU-1 100%, 75% and 50% load limits.

<u>Other tuning</u>: The period required to complete the manufacturer's recommended or necessary equipment tuning <u>not</u> associated with a major inspection. This may include, but not be limited to: emission tuning associated with a minor inspection or repair or associated with installation of equipment associated with the combustion turbine (e.g. a motor operated control valve, etc.). The maximum duration that EU-1 may operate below 50% power output or above "normal" emission limits (as specified in Table 3 of Operating Permit No. SE-14-006) during "other tuning" event is limited to 240 minutes (4.0 hours)), where "normal" refers to EU-1 100%, 75% and 50% load limits.

- 11. In accordance to 40 CFR Part 60, Subpart GG, 60.334, a "4-hour rolling average NO_x concentration" is the arithmetic average of the average NO_x concentration measured by the CEMS for a given hour (corrected to 15% O₂) and the three unit operating hour average NO_x concentrations immediately preceding that unit operating hour.
- 12. Maximum allowable potential emissions for the emergency diesel fire pump reflect 300 hours per year maximum allowable operation for emergency purposes only, including normal maintenance and testing, as defined in 310 CMR 7.00.
- 13. Chart means the Ringlemann Scale for grading the density of smoke, as published by the United States Bureau of Mines and as referred to in the Bureau of Mines Information Circular No. 8333, or any smoke inspection guide approved by MassDEP.
- 14. Facility-wide emissions include the combustion turbine, a small 2-cell auxiliary cooler, an emergency diesel fire pump operating a maximum of 300 hours per year, and other insignificant/miscellaneous activities associated with support operations
- 15. Greenhouse gas (GHG) means any chemical or physical substance that is emitted into the air and that the Department may reasonably anticipate will cause or contribute to climate change including, but not limited to, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF₆).
- 16. To calculate the amount of a consecutive 12-month rolling period take the current calendar month amount and add it to the previous 11 calendar months total amount.
- 17. The 100%, 75%, and 50% short-term emission limits (lb/hr) do not apply during periods of startup, shutdown, recommissioning, protective load shedding or other tuning events/periods, which are uniquely defined and specified.

B. COMPLIANCE DEMONSTRATION

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

		Table 4
EU		Monitoring and Testing Requirements
EU-1	1)	In accordance with 310 CMR 7.70(8) and 4B08036, the Permittee shall comply with all monitoring and testing requirements for annual CO_2 emission, net electrical output, and net steam output. (State Only Requirement)
	2)	In accordance with Approval No. SE-17-004, install, calibrate, test, and operate a data acquisition system(s) (DAS) and stack continuous emission monitoring system (CEMS) to measure and record flue gas emissions of NO_x , CO, O_2 , and NH_3 .
	3)	In accordance with Approval No. SE-17-004, use and maintain the CEMS as "direct compliance" monitors to measure NO_x , CO (and VOC), O_2 , and NH_3 . "Direct compliance" monitors generated data that legally documents the compliance status of a source. MassDEP shall utilize the data generated by the "direct compliance" monitors for compliance and enforcement purposes.
	4)	In accordance with Approval No. SE-17-004, determine continuous compliance with the VOC emission limits (one-hour block average and yearly) contained in Table 3 of this Operating Permit by monitoring CO emissions with the CO CEMS. If the gas turbine is operating in a condition of cold start, hot start, shutdown, re-commissioning, protective load shedding or other tuning events or periods (refer to Table 3 Note 10 for definitions of these terms), the VOC emissions shall be considered as occurring at the emission rate approved here in Table 3 of this Operating Permit for such periods of time, provided that the monitored CO emissions are within the limitations specified in Table 3 of this Operating Permit.
		If the gas turbine is operating at 50% load or greater, and if CO emissions are below the CO emission limit at the given gas turbine operating conditions, the VOC emissions shall be considered as occurring at the emission limit contained in Table 3 of this Operating Permit. If the gas turbine is operating at 50% load or greater, and if CO emissions are above the CO emission limit at the given gas turbine operating conditions, the VOC emissions shall be
		considered as occurring as determined by the following equation: $VOC_{Actual} = VOC_{Limit}(CO_{Actual}/CO_{Limit})$
	5)	In accordance with Approval No. SE-17-004, ensure that all stack monitors and recording equipment comply with MassDEP-approved performance and location specifications, and conform with the U.S. EPA monitoring specifications at 40 CFR 60.13, 40 CFR 60 Appendices B and F, 40 CFR 72, 40 CFR 75 and 310 CMR 7.00, as applicable.
	6)	In accordance with Approval No. SE-17-004, comply with the applicable monitoring requirements contained in 40 CFR 60, 40 CFR 72, 40 CFR 75, and 310 CMR 7.00, as applicable or subject to any custom monitoring schedule approved by MassDEP.

	Table 4 (continued)			
EU	Monitoring And Testing Requirements			
	 In accordance with Approval No. SE-17-004, equip the CEMS with audible and visible alarms to activate when emissions exceed the limits in Table 3 of this Operating Permit. 			
EU-1	 In accordance with Approval No. SE-17-004, operate each CEMS at all times except for periods of CEMS QA/QC, calibration checks, zero and span adjustments, CEMS malfunction, maintenance and repair. 			
	9) In accordance with Approval No. SE-17-004, obtain and record emission data from each CEMS for at least 95% of the emission unit operating hours per quarter, except for periods of CEMS calibration checks, zero and span adjustments, maintenance, and periods of all malfunction. In all cases, 40 CFR Part 75 data validation protocols may be used when calculating the data percentages.			
	10) In accordance with Approval No. SE-17-004, monitor and record the sulfur and nitrogen content in natural gas in accordance with 40 CFR 60, Subpart GG and 40 CFR 75, as applicable.			
	11) In accordance with Approval No. SE-17-004, maintain onsite for CEMS equipment, an adequa supply of spare parts to maintain the online availability and data capture requirements pursuant the Approval No. SE-17-004.			
	12) In accordance with Approval No. SE-17-004, install and operate continuous monitors and ala systems to monitor temperatures at the inlets to the control system SCR and CO catalysts.			
	13) In accordance with Approval No. SE-17-004, comply with all provisions of 40 CFR 60, 4 72, 40 CFR 75, including 310 CMR 6.00 through 8.00, that are applicable to this facility. following alternative monitoring schedule shall apply, which permits certain features of th operation, data validation and data reduction of the continuous emission monitoring syste (CEMS) to be operated at variance with the established requirements of 40 CFR Parts 60			
	 a) In lieu of the calibration drift limit of 2.5%, as required by 40 CFR 60, Appendix B, Performance Specification (PS) 2, the Permittee shall use an alternative calibration drift limit of 5.0% (or 0.5 ppm) in the event that 40 CFR 60 calibration performance re-testing of the NO_x analyzer low range scale (10 ppm) is required. This alternative calibration drift limit is to be used for the 7-day drift test. The drift limits for routine daily calibration checks for determination of out-of-control periods will remain at the levels specified in 40 CFR 60, Appendix F, Section 4, and Appendix B, PS 2. 			
	b) In lieu of the relative accuracy requirement of 20% of the Reference Method or 10% of the standard as required by 40 CFR 60, Appendix B, the Permittee shall use an alternative relative accuracy of 0.5 ppm of NO _x , corrected to 15% O ₂ , and 0.002 lb/MMBtu. For lb/hr emission limits, the Permittee shall use a relative accuracy corresponding to 0.002 lb/MMBtu times the arithmetic average of the average firing rate during each relative accuracy test audit (RATA) run. The lb/hr of NO _x emissions as measured by the Reference Method during the RATA will be the lb/MMBtu of NO _x as measured by the Reference Method times the MMBtu/hr firing rate during each RATA run as measured by the 40 CFR 75 compliant fuel flow meter.			
	13) continued			

	Table 4 (continued)		
EU	Monitoring And Testing Requirements		
	13) continued		
	c) In lieu of the quarterly cylinder gas audit (CGA) procedures required under 40 CFR 60, Appendix F, the Permittee shall use the 40 CFR 75, Appendices A and B, linearity procedures for the quarterly CGA testing for NO _x and O ₂ .		
	d) The Permittee will not be required to conduct a CGA for CO and NH ₃ in any quarter that the combustion turbine operates less than 168 hours.		
EU-1	e) The Permittee shall perform hourly data validation in accordance with 40 CFR 75.10(d)(1) for NO _x , O ₂ , CO, and NH ₃ , which specifies that a valid data hour must contain at least one valid (quality assured) data point in each of the 15-minute quadrants that the combustion turbine is online. However, valid data is only required in two 15-minute quadrants for hours in which quality assurance or preventive maintenance activities are being conducted on the CEMS.		
	f) The Permittee shall apply O ₂ diluent caps in accordance with 40 CFR 75, Appendix F, Section 3 provisions for the determination of lb/MMBtu and ppmvd at 15% O ₂ emission rates.		
	g) The Permittee shall designate an hour during which fuel is fired for any period as an "oper- ating hour", in accordance with 40 CFR 72.2 definitions.		
	h) In lieu of 40 CFR 60 requirements, the high range of the NO_x analyzer shall be subject to quarterly quality assurance assessment in accordance with 40 CFR 75.		
	 Data validation and frequency for performing daily calibration error (CE) tests, routine quality assurance cylinder gas audits (CGA) and Relative Accuracy Test Audits (RATA) may be conducted in accordance with the applicable quality assurance provisions for NO_x CEMS contained in 40 CFR 75 Appendix B, Section 2.1 for CE, Section 2.2 for CGA and Section 2.2 for RATA. 		
	14) In accordance with 40 CFR 72.9, 40 CFR Part 75, and 4B97112, the Permittee shall comply with all monitoring requirements for NO _x and SO ₂ emissions. The requirements of 40 CFR Part 75 shall not affect the responsibility of the Permittee to monitor emissions of other pollutants from or other emissions characteristics of EU-1.		
EU-2	15) In accordance with Approval No. SE-17-004, the maximum allowable hours of operation for the emergency diesel fire pump shall not exceed 300 hours per year. The engine shall operate for "emergency purposes" only, including normal maintenance and testing, as defined in 310 CMR 7.00.		
	16) In accordance with 40 CFR 63, Subpart ZZZZ, §63.6625(e), operate and maintain the stationary Reciprocating Internal Combustion Engine (RICE) and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.		
	17) In accordance with 40 CFR 63, Subpart ZZZZ, §63.6625(f), install a non-resettable hour meter if one is not already installed.		

	Table 4 (continued)
EU	Monitoring And Testing Requirements
EU-2	18) In accordance with 40 CFR 63, Subpart ZZZZ, §63.6625(h), minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.
	19) In accordance with 40 CFR 63, Subpart ZZZZ, Table 2d:
	 a) Change oil and filter every 500 hours of operation or annually, whichever comes first; b) Inspect air cleaner for every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and c) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
	20) In accordance with 40 CFR 63, Subpart ZZZZ, §63.6625(i), an oil analysis program may be utilized as an option to extend the specified oil change requirement in Table 2d to this subpart (see Item 19a. above).
Facility- wide	21) In accordance with Approval No. SE-17-004, all periods of excess emissions, even if attributable to an emergency, malfunction, or startup/shutdown, shall be quantified and included in the determination of 12-month rolling total emissions and compliance with the emission limits as stated in Table 3 of this Operating Permit. Any period of excess emissions of CO shall count as a period of excess emissions of VOC, and the excess emission of VOC shall be accumulated towards the 40.9 tons per consecutive 12-month period facility-wide emission limitation for VOC listed in Table 3 of this Operating Permit.
	22) In accordance with Approval No. SE-17-004, the Permittee shall ensure that the facility is constructed to accommodate the emission testing requirements contained herein. All emission testing will be conducted in accordance with 310 CMR 7.13 and the Department's <u>Guideline for Source Emission Testing</u> and in accordance with applicable U.S. EPA test methods as specified in 40 CFR 60, 40 CFR 72, 40 CFR 75 and 310 CMR 7.00 or by a methodology approved by the Department. The dates and times for conducting emissions compliance testing shall be coordinated with Department personnel for a mutually agreed-upon schedule for testing.
	23) In accordance with Approval No. SE-17-004, prior to compliance testing when required by the Department, a pre-test protocol shall be submitted for Department review and approval. 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. The Test Protocol must be submitted to the Department at least thirty (30) days prior to the commencement of testing for written Department approval prior to testing. The pre-test protocol shall identify the independent third-party testing company, if known.
	24) In accordance with Approval No. SE-17-004, the final compliance test results report shall be submitted to the Department within forty-five (45) days of the completion of testing. The final emission test report shall include, but not be limited to: a description of the emission compliance testing program conducted, applicable emission limits for which testing was required and a summary of test results demonstrating compliance and/or noncompliance with applicable limits, sampling point locations, sampling equipment, analytical procedures, actual test methods used, the actual operating conditions for which the testing was conducted and the identity of the independent third-party testing company.

Table 4 (continued)				
EU	Monitoring And Testing Requirements			
Facility- wide	25) In accordance with Approval No. SE-17-004 and pursuant to 310 CMR 7.13, the Department may require additional emissions testing of the facility at any time in order to ascertain compliance with the Department's Regulations or any provision, condition and/or requirement(s) contained in Approval No. SE-17-004.			
	 26) In accordance with Operating Permit No. 4V07027, emissions compliance testing (stack testing), if and when requested by MassDEP or U.S. EPA, to be conducted in accordance with 310 CMR 7.13 and 40 CFR 60 utilizing the following methods or other methods as approved by MassDEP or USEPA: PM – Methods 1 through 5 NO_x – Method 7E CO – Method 10 SO₂ – Method 6C O₂ – Method 6C O₂ – Method 25A/Method 18 NH₃ – CTM 027 Opacity – Method 9 Any other testing if and when requested by MassDEP or U.S. EPA. 27) In accordance with 310 CMR 7.71(1) and Appendix C(9), the Permittee shall establish and maintain data systems or record keeping practices (e.g. fuel use records, SF₆ usage documentation, Continuous Emissions Monitoring System) for greenhouse gas emissions to ensure compliance with the reporting provisions of M.G.L. c. 21N§ 2, the Climate Protection and Green Economy Act, Acts of 2008, c. 298, § 6. (State Only Requirement) 			

Table 4 Key:

EU	= Emission Unit	CO	= Carbon Monoxide		
No.	= Number	NO _x	= Nitrogen Oxides		
PM	= Particulate Matter	NH ₃	= Ammonia		
VOC	= Volatile Organic Compounds	CO_2	= Carbon Dioxide		
O ₂	= Oxygen	SF_6	= Sulfur Hexafluoride		
lb/MMBtu	= pounds per Million British thermal units	lb/hr	= pound per hour		
CMR	= Codes of Massachusetts Regulations	CFR	= Codes of Federal Regulations		
ppm	= parts per million	QA/QC	= Quality Assurance/Quality Control		
e.g.	= for example	§	= section		
SCR	= Selective Catalytic Reduction	M.G.L.	= Massachusetts General Law		
%	= percent	yearly	= 12-month rolling total		
RICE	= Reciprocating Internal Combustion Engine				
Department	= Massachusetts Department of Environmental Protection				
MassDEP	= Massachusetts Department of Environmental Protection				
U.S. EPA	= United States of Environmental Protection Ag	ency			
CTM	= Conditional Test Method				

	Table 5
EU	Record Keeping Requirements
EU-1	 In accordance with 310 CMR 7.70(1), (2), (8) and Approval No. 4B08036, the Permittee shall keep on site at the source all records required under 310 CMR 7.70(1), 310 CMR 7.70(2) and 310 CMR 7.70(8), or unless otherwise stated by MassDEP, for a period of 10 years. (State Only Requirement)
	2) In accordance with Approval No. SE-17-004, maintain records on the natural gas sulfur content in accordance with 40 CFR 60 Subpart GG and 40 CFR 75, as applicable.
	3) In accordance with Approval No. SE-17-004, maintain onsite permanent records of output from all continuous monitors for flue gas emissions, daily and yearly fuel consumption, SCR and CO control system inlet temperatures, turbine inlet and ambient temperatures, and a tabulation of periods of operation (dispatch). These records shall be made available to MassDEP and/or U.S. EPA on request.
	4) In accordance with Approval No. SE-17-004, maintain a log to record problems, upsets or failures associated with the emission control system, CEMS or ammonia handling system.
	5) In accordance with 40 CFR 72.9, 40 CFR Part 75, and Permit No. 4B97112, the Permittee shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing to EPA or MassDEP;
	 (i) Certificate of representation for the designated representative for the source and all supporting documents;
	(ii) All emissions monitoring information, to the extent that a 3 year retention period applies under 40 CFR 75, the records shall be kept on site for a period of 3 years instead of 5 years;
	(iii) Copies of all reports, compliance certifications, and other submissions and all record made or required by the Acid Rain Program.
EU-2	6) In accordance with Operating Permit No. SE-14-006, maintain shipping receipts from the fuel oil supplier(s) for each shipment of fuel oil delivered, certifying that the fuel oil sulfur content does not exceed 0.0015% sulfur by weight.
	7) In accordance with 40 CFR 63, Subpart ZZZZ, §63.6655(e), keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan.
	8) In accordance with 40 CFR 63, Subpart ZZZZ, §63.6655(f), keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.
Facility- wide	9) In accordance with Approval No. SE-17-004, maintain, for the life of the facility, all operating monitoring records and logs. The Permittee shall maintain onsite and make available to the Department and/or U.S. EPA for inspection upon request, the five (5) most recent years' data/records.

Table 5				
EU	Record Keeping Requirements			
Facility- wide	10) In accordance with Approval No. SE-17-004, the Permittee shall comply with all applicable recordkeeping requirements contained in 40 CFR 60, 40 CFR 72, 40 CFR 75, 310 CMR 7.00 and Approval No. SE-17-004.			
	11) In accordance with 310 CMR 7.12(3)(b), copies of Source Registration and other information supplied to the Department to comply with 310 CMR 7.12 shall be retained by the Facility owner or operator for five years from the date of submittal.			
	12) Maintain records of any emissions compliance testing done in accordance with 310 CMR 7.13 and 40 CFR 60, Appendix A, if such testing is requested by MassDEP.			
	13) In accordance with 310 CMR 7.71(6)(b) and (c), the Permittee shall keep on site at the facility documents of the methodology and data used to quantify emissions for a period of 5 years from the date the document is created. The Permittee shall make these documents available to MassDEP upon request. (State Only Requirement)			

Table 5 Key:

EU No. § % SCR CO	 = Emission Unit = Number = section = percent = Selective Catalytic Reduction = Carbon monoxide 	CFR i.e. CEMS RICE yearly	 = Code of Federal Regulation = that is = Continuous Emission Monitoring System = Reciprocating Internal Combustion Engine = 12 month rolling total
CMR	= Code of Massachusetts Regulation		
Department	= Massachusetts Department of Environmental F	rotection	
MassDEP U.S. EPA	= Massachusetts Department of Environmental F = United States of Environmental Protection Age	Protection ency	

Table 6					
EU	Reporting Requirements ⁽¹⁾				
EU-1	 In accordance with 40 CFR 60, §60.7(c) and 40 CFR 60, Subpart GG, §60.334(j), submit reports of excess emissions and monitor downtime. Excess emissions shall be reported for all periods of unit operation, including start-up, shutdown and malfunction. All reports shall be postmarked by the 30th day following the end of each six-month period. 				
	2) In accordance with 40 CFR Part 60 Appendix F, Section 1.1 and 7, submit a Data Assessment Report for each Cylinder Gas Audit of the CO and NH ₃ CEMS to the MassDEP, SERO, BAW, Permit Chief. The report is due within 30 days after the close of the quarter in which the audit was conducted.				

	Table 6 (continued)					
EU	Reporting Requirements ⁽¹⁾					
EU-1	3) In accordance with 40 CFR 75, §75.61(a)(5), notification of QA testing is required for Relative Accuracy Test Audits (RATAs) and Appendix E/LME (Low Mass Emission) unit tests. Notification must be made at least 21 days prior to the scheduled test date to EPA and to MassDEP. If tests must be rescheduled, 24 hours notice must be given.					
	4) In accordance with 40 CFR 75, a previously approved RATA protocol may be referenced at the time of test notification provided that the referenced protocol was completed in accordance with current 40 CFR 75 procedures, addresses all previous MassDEP protocol comments to the satisfaction of the MassDEP, and none of the information has changed. If a revised protocol must be submitted, it must be submitted at least 21 days prior to the scheduled test date.					
	5) In accordance with 40 CFR 75, a hard copy of the QA RATA or Appendix E/LME test results must be submitted to the MassDEP Southeast Regional Office within 45 days of completion of tests. The electronic results must be submitted to EPA in the quarterly electronic data report (EDR).					
	 In accordance with Approval SE-17-004, notify the MassDEP, SERO, BAW Permit Chief in writing at least three (3) business days prior to any equipment tuning or re-commissioning events, as defined herein. 					
	7) In accordance with 310 CMR 7.70(8)(d), the Permittee shall submit to the appropriate MassDEP Regional Office and EPA any notification of testing or any testing protocol in compliance with the requirements of 40 CFR 75.61. (State Only Requirement)					
	8) In accordance with 310 CMR 7.70(8)(e)3. and Approval No. 4B08036, the Permittee shall submit a Monitoring System certification to the appropriate MassDEP Regional Office within 45 days after completing all CO ₂ monitoring system initial certification or recertification tests required under 310 CMR 7.70(8)(b). (State Only Requirement)					
	9) In accordance with 310 CMR 7.70(4)(a)1. and Final Approval No. 4B08036, the Permittee shall submit a Triennial Compliance Certification Report for each control period electronically in the RGGI CO ₂ Allowance Tracking System (COATS) to MassDEP by March 1 st of the calendar year following the control period. (State Only Requirement)					
	10) In accordance with 310 CMR 7.70(8)(h)6.c and Final Approval No. 4B08036, the Permittee shall submit an Annual Net Output Report for each calendar year electronically to MassDEP's agent in a format prescribed by MassDEP by March 1 st of the preceding calendar year. (State only Requirement)					
	 In accordance with 310 CMR 7.70(8)(e)4.b and Final Approval No. 4B08036 the Permittee shall submit a Quarterly CO₂ Emissions Report electronically to EPA within 30 days following the end of the calendar quarter covered by the report. (State Only Requirement) 					
	12) In accordance with 40 CFR 72.9, 40 CFR 75, and Permit No. 4B97112, the Permittee shall submit to the appropriate MassDEP Regional Office and EPA any notification of testing or any testing protocol.					

Table 6 (continued)					
EU	Reporting Requirements ⁽¹⁾				
	13) In accordance with 40 CFR 72.9, 40 CFR 75, and Permit No. 4B97112, the Permittee shall submit a Quarterly SO ₂ report to EPA within 30 days following the end of each calendar quarter.				
	14) In accordance with 40 CFR 72.9, 40 CFR 75, and Permit No. 4B97112, the Permittee shall submit a Quarterly NO _x report to EPA within 30 days following the end of each calendar quarter.				
EU-1	15) In accordance with 40 CFR 75, the Permittee shall submit a Quarterly CO ₂ report to EPA within 30 days following the end of each calendar quarter.				
	16) In accordance with 40 CFR 77 and Permit No. 4B97112, the Permittee shall submit a proposed offset plan in any calendar year where EU-1 has excess emissions. In addition, the Permittee shall pay any penalties specified in 40 CFR Part 77 and comply with the terms of an approved offset plan.				
Facility- wide	17) In accordance with Approval No. SE-17-004, notify the MassDEP, SERO, BAW, Permit Chief by telephone: (508) 946-2824, email:sero.air@state.ma.us or fax: (508) 947-6557, as soon as possible, but no later than three (3) days after discovery of an exceedance(s) of Table 3 of this Operating Permit. A written report shall be submitted to MassDEP, SERO, BAW, Permit Chief within ten (10) business days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken and action plan to prevent future exceedance(s).				
	18) In accordance with Approval No. SE-17-004, submit a report quarterly to MassDEP. This report shall be submitted by the 15 th of the following month and shall minimally contain the following:				
	a) The monthly reports from the facility CEMS containing summary emission data in a format acceptable to MassDEP.				
	b) For each period of excess emissions or excursions from allowable operating conditions, list the duration, cause (including whether it is attributable to a malfunction ⁽³⁾ or emergency ⁽²⁾), the response taken, and the amount of excess emissions. Periods of excess emissions shall include periods of startups and/or shutdowns, re-commissioning, protective load shedding, other tuning, malfunction, emergency, and upsets or failures associated with the emission control system or CEMS.				
	c) A tabulation of periods of operation (dispatch).				
	19) In accordance with Approval No. SE-17-004, immediately notify the MassDEP, SERO, BAW, Permit Chief by telephone: (508) 946-2824 and within three (3) working business days in writing, following a release or threat of a release of ammonia, and/or upsets or malfunctions to the ammonia handling or delivery systems. The Permittee must comply with all notification procedures required under MGL c. 21E <u>Spill Notification Regulations</u> .				
	20) In accordance with Approval No. SE-17-004, submit to MassDEP all information required herein over the signature of a "Responsible Official" as defined in 310 CMR 7.00 and shall include the Certification statement as provided in 310 CMR 7.01(2)(c).				

	Table 6 (continued)					
EU	Reporting Requirements ⁽¹⁾					
Facility-	21) In accordance with Approval No. SE-17-004, comply with all applicable reporting requirements contained in 40 CFR 60, 40 CFR 72, and 40 CFR 75.					
wide	22) In accordance with 310 CMR 7.12 and Approval No. SE-17-004, the Permittee shall submit a Source Registration/Emission Statement Form to MassDEP on an annual basis.					
	23) In accordance with 310 CMR 7.13(1) and 7.13(2), the Permittee, if determined by MassDEP that stack testing is necessary to ascertain compliance with MassDEP's regulations shall cause such stack testing to be summarized and submitted to MassDEP as prescribed in the agreed-to test protocol.					
 24) In accordance with 310 CMR 7.00, Appendix C(10)(a), the Permittee, upon Mas shall transmit any record relevant to the Operating Permit within 30 days of the r MassDEP or within a longer time period if approved in writing by MassDEP. The transmitted on paper, on computer disk, or electronically at the discretion of M 						
	25) In accordance with 310 CMR 7.71(5), the Permittee shall electronically submit and certify by April 15 th of each year a greenhouse gas emissions report to MassDEP. (State Only Requirement)					
	26) In accordance with Approval SE-17-004, all notifications and reporting required in accordance with Section No. 25 of this Operating Permit shall be sent directly to:					
	Department of Environmental Protection Bureau of Air and Waste Southeast Regional Office 20 Riverside Drive Lakeville, MA 02347					
	ATTN: Thomas Cushing, Permit Chief					
	Phone: (508) 946-2824 Fax: (508) 947-6557					

Table 6 Key:

EU= Emission UnitCO= Carbon Monoxidec.= Chapter§= sectionCMR= Codes of Massachusetts RegulationsNOx= Nitrogen oxidesEPA= United States Environmental Protection AgencyRATA= Relative Accuracy Test AuditCFR= Codes of Federal RegulationsMGL= Massachusetts General LawMassDEP= Massachusetts Department of Environmental ProtectionDepartment= Massachusetts Department of Environmental ProtectionSERO= Southeast Regional OfficeCEMS= Continuous Emission Monitoring SystemRGGI= Regional Greenhouse Gas Initiatives	No. NH ₃ CO ₂ QA % SO ₂ BAW	 Number Ammonia Carbon dioxide Quality Assurance percent Sulfur dioxide Bureau of Air and Waste
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Table 6 Notes:

- 1. The annual Source Registration/Emission Statement shall be submitted to the DEP Office specified in the instructions. All other reports, including both 6-month summary reports, are to be submitted to the Southeast Regional Office address, as specified on the letterhead of this Operating Permit.
- 2. <u>Emergency</u>: 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 technology based limitation under the Operating Permit No. SE-14-006, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by the improperly designed equipment, lack of preventative maintenance, careless or improper operations, operator error or decision to keep operating despite knowledge of any these things.
- 3. <u>Malfunction</u>: 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 conditions or preventable equipment breakdown, shall not be considered malfunctions.

C. <u>GENERAL APPLICABLE REQUIREMENTS</u>

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:

Table 7			
Regulation	Description		
310 CMR 7.16: Reduction of Single Occupant Commuter Vehicle Use	Facility employs fewer than 20 people.		
40 CFR 64: Compliance Assurance Monitoring	Facility utilizes a continuous compliance determination method $(NO_x/CO CEMS)$, as defined in 40 CFR 64.1, and is therefore exempt from 40 CFR 64.		

Table 7 Key:

CMR	= Code of Massachusetts Regulations
CFR	= Code of Federal Regulations
NOx	= Nitrogen Oxides
CO	= Carbon Monoxide
CEMS	= Continuous Emission Monitoring System

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5. <u>SPECIAL TERMS AND CONDITIONS</u>

The Permittee is subject to and shall comply with the following special terms and conditions that are not contained in Table 3, 4, 5, and 6:

	Table 8				
EU	Special Terms and Conditions				
	1. In accordance with Approval No. SE-17-004, the Permittee shall comply with the approved short-term emission limits (lb/hr, lb/MMBtu and ppmvd) specified in the Approval No. SE-17-004 based on a one (1)-hour block average.				
EU-1	 In accordance with Approval No. SE-17-004, natural gas shall be the only fuel burned in the combustion turbine. 				
	3. In accordance with Approval No. SE-17-004, the Permittee shall ensure that the SCR control equipment for the gas turbine is operational whenever the turbine is operated at 50% power or greater.				
	4. In accordance with Approval No. SE-17-004, the carbon monoxide (CO) catalyst shall achieve and maintain a 75% minimum CO removal efficiency under 100% load operation, and a 76% minimum CO removal efficiency under 75% load operation. Demonstration of compliance with the CO emission limits in Table 3 of this Operating Permit shall be deemed to satisfy demonstration of compliance with the CO removal efficiency requirements described herein.				
	5. In accordance with Approval No. SE-17-004, the maximum allowable heat rate input for the combustion turbine shall not exceed 11,628,900 MMBtu per consecutive 12-month period for 100% load operation (maximum total input if turbine operated 8,760 hours per consecutive 12-month period at 100% load). Operation of the turbine at variable load conditions (i.e., conditions other than full-time operation at 100% load, 8,760 hours per consecutive 12-month period), including, but not limited to startup, shutdown, re-commissioning, protective load shedding and other tuning events/periods shall not result in an exceedance of the maximum allowable potential emissions listed in Table 3 of this Operating Permit. Records shall be maintained to document that the maximum allowable emission limitations in Table 3 of this Operating Permit are not exceeded.				
	6. In accordance with Approval No. SE-17-004, the Permittee shall allow the gas turbine to operate at less than 50% power only during startups, shutdowns, re-commissioning, protective load shedding and other tuning events/periods, as defined herein. Operation at these loads for "hot start" shall not exceed 90 minutes (1.5 hours). The hot start period may be extended for no more than an additional 60 minutes (1.0 hour), if the steam turbine is not ready to accept additional steam flow. The gas turbine must be in stable operation and all emission levels must be in compliance with Table 2D of Plan Approval No. SE-17-004during the extended hot start. Should the hot start be extended, Dighton Power will report the extension and the reasons for it in the report required in Section 3.B. Table 5 Condition 6 of Plan Approval No. SE-17-004. Operation for "cold start" shall not exceed 240 minutes (4.0 hours). Operations for shutdown shall not exceed 90 minutes (1.5 hours).				
	A "hot start" is defined as the maximum duration of time to achieve emissions compliance representative of steady- state operation (at emission rates not to exceed those listed in Section 3.A.Tables 2B and 2C of Plan Approval No. SE- 17-004) at nominal 50% load with the turbine offline for 24 hours or less.				
	Continued				

	Table 8 (continued)						
EU	Special Terms and Conditions						
	6. continued						
EU-1	A "cold start" is defined as the maximum duration of time to achieve emissions compliance representative of steady- state operation (at emission rates not to exceed those listed in Section 3.A.Tables 2B and 2C of Plan Approval No. SE- 17-004) at nominal 50% load with the turbine having been off-line for a period greater than 24 hours. If the turbine has had less than 120 minutes (2.0 hours) of flame time in the 24 hours preceding a start, the start will be considered a cold start.						
	"Shutdown" is defined as the maximum duration of time from emissions compliance representative of steady-state operation (at emission rates not to exceed listed in Section 3.A.Tables 2B and 2C of Plan Approval No. SE-17-004) at 50% nominal load to "no flame".						
	"Re-commissioning" is defined as the period required to complete the manufacturer's recommended equipment tuning following the completion of a major inspection. The maximum duration that EU1 may operate below 50% power output or above "normal" emission limits (as specified in Section 3.A.Tables 2B and 2C of Plan Approval No. SE-17- 004) during a "re-commissioning" event is 1,800 minutes (30.0 hours).						
	"Protective load shedding" is defined as an event during which EU1 reduces load to less than 50% power output without stopping the combustion process to protect the turbine. The maximum duration that EU1 may operate below 50% power output or above "normal" emission limits (as specified in Section 3.A.Tables 2B and 2C of Plan Approval No. SE-17-004) during a "protective load shedding" event/period is limited to 240 minutes (4.0 hours)						
	"Other Tuning" is defined as the period required to complete the manufacturer's recommended or necessary equipment tuning <u>not</u> associated with a major inspection. This may include, but not be limited to: emission tuning associated with a minor inspection or repair or associated with installation of equipment associated with the combustion turbine (e.g. a motor operated control valve, etc). The maximum duration that EU1 may operate below 50% power output or above "normal" emission limits (as specified in Section 3.A.Tables 2B and 2C of Plan Appro No. SE-17-004) during "other tuning" is limited to 240 minutes (4.0 hours) per event.						
	 In accordance with Approval No. SE-17-004, the Permittee shall ensure that during re-commissioning, protective load shedding or other tuning periods/events all reasonable attempts are made to limit the amount of air emissions. 						
	 In accordance with Approval No. SE-17-004, the maximum allowable heat rate input for the combustion turbine shall not exceed 1,423.08 MMBtu/hr (HHV) at 100% load operation nor shall it exceed 1,150.35 MMBtu/hr (HHV) at 75% load operation. 						
	9. In accordance with Operating Permit No. 4V07027, emission Unit No. 1 (EU-1) shall continue to emit through a single stack having the following parameters:						
	Stack No.1Stack Height150 feetStack Exit Diameter204 inchesStack MaterialSteel						
EU-2	10. In accordance with Approval No. SE-17-004, the maximum allowable hours of operation for the emergency diesel engine fire pump (EU-2) shall not exceed 300 hours per year. The engine shall operate for "emergency purposes" only, including normal maintenance and testing, as defined in 310 CMR 7.00.						

Table 8 (continued)								
EU	Special Terms and Conditions							
EU-2	11. In accordance with 40 CFR 63, Subpart ZZZZ, §63.6640(f), any operation other than emergency operation, maintenance and testing, and operation in nonemergency situations for 50 hours per year, as described herein, is prohibited.							
	1) There is no time limit on the use of emergency stationary RICE in emergency situations.							
	2) The Permittee may operate the emergency stationary RICE for any combination of the purposes specified in paragraph (i) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (i) through (iii) of this section counts as part of the 100 hours per calendar year.							
	 Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. 							
	3) Emergency stationary RICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.							
	 Emission Unit No. 2 (EU-2) is subject to the requirements of 40 CFR 63.1-16, Subpart A, "General Provisions" as indicated in Table 8 to Subpart ZZZZ of 40 CFR 63. Compliance with all applicable provisions therein is required. 							
	 In accordance with Operating Permit No. 4V07027, emission Unit No. 2 (EU-2) shall continue to emit through a single stack having the following parameters: 							
	Stack No.2Stack Height12. 3 feetStack Exit Diameter6 inchesStack MaterialCarbon Steel							
Facility- wide	14. In accordance with Approval No. SE-17-004, the Permittee shall at all times keep enough of the ball- plastic baffles within the containment area around the ammonium hydroxide tank to provide 91 percent surface coverage of any spilled ammonium hydroxide. The balls must be free of ice and other restrictions that would inhibit their flotation.							
	15. In accordance with Approval No. SE-17-004, the Permittee shall maintain in the facility control room portable ammonia detectors (e.g., Draeger tubes) for use during a spill or a typical atmospheric release.							
	16. In accordance with Approval No. SE-17-004, all personnel shall be properly trained to operate the facility and control equipment in accordance with vendor specifications. All persons responsible for the operation of the ammonia handling and SCR control systems shall sign a statement affirming that they have read and understand the approved standard operating and standard maintenance procedures (SOPs/SMPs). This training shall be updated at least once annually.							

Table 8 (continued)							
EU	Special Terms and Conditions						
	17. In accordance with Approval No. SE-17-004, the Permittee shall ensure that the facility's auxiliary cooling tower uses no chromium-based water treatment chemicals.						
Facility- wide	18. In accordance with Approval No. SE-17-004, the standards operating and maintenance procedures for the ammonia handling system shall be stored in a convenient location (control room/technical library) and shall be made readily available to all employees.						
	19. Federal Acid Rain Program: Phase II Acid Rain Permit						
	 Emission Unit No. 1 is subject to the requirement of Phase II of the federal Acid Rain Program. Pursuant to 40 CFR 72.71, 40 CFR 72.73, and 310 CMR 7.00, Appendix C(3)(n), MassDEP is the permitting authority for Phase II Acid Rain Permits. MassDEP issued Phase II Acid Rain Permit No. 4B97112 to the Permittee on December 30, 1997. 						
	2. The Permittee's designated representative may buy, sell, trade, or transfer allowances for or between Emission Unit accounts at any time, except between January 30 th and the completion of the annual SO ₂ allowance reconciliation, for the preceding year(s). By January 30 th of each year, the Permittee must hold in the SO ₂ allowance account for each emission unit at least one allowance for each ton of SO ₂ emitted the previous year. The number of allowances allocated to Phase II affected emission units by U.S. EPA was changed in a 1998 revision to 40 CFR 73, Tables 2, 3, and 4. This revision affected allowances from the year 2000 forward. In addition, the number of allowances actually held by an affected Emission Unit in a unit account may differ from the number allocated by the U.S. EPA.						
	3. The yearly allowance allocations as identified in 40 CFR 73 and Phase II Acid Rain Permit No. 4B97112, as revised in 40 CFR 73, are listed below:						
	Emission Unit Calendar Year						
	2000 – 2009 2010 and beyond						
	4. Acid Rain Approval No. 4B97112 is incorporated by reference into Operating Permit No. SE-14-006.						

Table 8 (continued)							
EU	Special Terms and Conditions						
Facility- wide	20. In accordance with Approval No. SE-17-004, sound levels shall not exceed the allowable sound impacts specified below or fail to comply with the Department's Division of Air Quality Control (DAQC) Noise Policy No. 90-001. The operation of the facility shall result in no "pure tones" as defined by the DAQC Noise Policy No. 90-001.						
			Allowable Sound Im	pacts: A-Weighted	Sound Level in Dec	ibels - dB(A)	
	Noise Receptors	Nighttime Ambient (L ₉₀)	Nighttime Ambient + Plant Impact (L ₉₀)	Nighttime Change	Daytime Ambient (L ₉₀)	Daytime Ambient + Plant Impact (L ₉₀)	Daytime Change
	RP-1 ⁽¹⁾	30	40	10	44	45	1
	RP-2 ⁽²⁾	28	38	10	37	40	3
	RP-3 ⁽³⁾	28	38	10	38	41	3
	RP-4 ⁽⁴⁾	28	38	10	34	39	5
	RP-5 ⁽⁵⁾	29	39	10	32	40	8
	CNL-1 ⁽⁶⁾	30	55	25	44	55	11
	CNL-2 ⁽⁷⁾	28	60	32	34	60	26
	CNL-3 ⁽⁸⁾	28	60	32	34	60	26
	CNL-4 ⁽⁹⁾	(See note 9)					
	Notes: (1) Receptor RP-1 (Lot 164) is the closest residence east (E). It is owned by Dighton Power. (2) Receptor RP-2 (formerly Elmasian/Harwood property line) is the residence southeast (SE). (3) Receptor RP-3 is the residential neighborhood near Susan Road west (W). (4) Receptor RP-4 (Cartin property line) is the residence northwest (NW). (5) Receptor RP-5 (Leonard property line) is the residence north (N). (6) Receptor CNL-1 (Advanced Looseleaf) is the property line east (E). (7) Receptor CNL-2 (Bristol County Agricultural School) is the property line north (N). (8) Receptor CNL-3 (Town of Somerset) is the property line southwest (SW). (9) Receptor CNL-4 (formerly Dighton Power/Elmasian property line) to the south (S) is now located on land owned by Dighton Power. (State-only requirement) (State-only requirement)						
	21. In accordance with Operating Permit No. SE-14-006, this Operating Permit does not negate the responsibility of the Permittee to comply with all the applicable General Conditions set forth in all the Plan Approvals issued and in effect for the facility.						

Table 8 (continued)					
EU	Special Terms and Conditions				
Facility- wide	22. In accordance with Approval No. SE-17-004, the Permittee shall be shielded from enforcement action brought for noncompliance with technology-based emission limitations ⁽¹⁾ specified in this Plan Approval as a result of an emergency ⁽²⁾ . In order to use emergency ⁽²⁾ 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⁽²⁾ occurred and that the Permittee can identify the cause(s) of the emergency⁽²⁾; B. the permitted facility was at the time being properly operated; C. during the period of the emergency⁽²⁾, 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 Plan Approval; and D. the Permittee submitted notice of the emergency⁽²⁾ to the MassDEP within two (2) business days of the time when emission limitations were exceeded due to the emergency⁽²⁾. This notice must contain a description of the emergency⁽²⁾, any steps taken to mitigate emission and corrective actions taken. 				
	If an emergency ⁽²⁾ 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.				
	(1) "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.				
	(2) "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 Plan Approval, 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.				

Table 8 key:

EU No. lb/hr lb/MMBtu % i.e	 = Emission Unit = number = pound per hour = pound per million British thermal unit = percent = that is 	$\begin{array}{l} \text{MMBtu/hr} \\ \text{HHV} \\ \text{CO} \\ \text{ppmvd} \\ \text{SO}_2 \end{array}$	 = million British thermal unit per hour = higher heating value = carbon monoxide = part per million volume, dry = sulfur dioxide 	
e.g. etc dB(A)	 = for example = and others = an expression of the relative loudness of sounds in air as perceived by the human ear 			
L ₉₀ MassDEP U.S. EPA	 = sound level equaled or exceeded 90% of the measurement time = Massachusetts Department of Environmental Protection = United States Environmental Protection Agency 			
CFR SCR RICE	 = Code of Federal Regulation = selective catalytic reduction = Reciprocating Internal Combustion Engine 			

6. <u>ALTERNATIVE OPERATING SCENARIOS</u>

The Permittee did not request alternative operating scenarios in its Operating Permit application.

7. <u>EMISSIONS TRADING</u>

A. INTRA-FACILITY EMISSION TRADING

The facility did not request intra-facility emissions trading in its Operating Permit application.

B. INTER-FACILITY EMISSION TRADING

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. <u>COMPLIANCE SCHEDULE</u>

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. <u>FEES</u>

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. <u>COMPLIANCE CERTIFICATION</u>

All documents submitted to 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 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 MassDEP and to the Air Compliance Clerk, 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:

- 1) the terms and conditions of the permit that are the basis of the certification;
- 2) the current compliance status and whether compliance was continuous or intermittent during the reporting period;
- 3) the methods used for determining compliance, including a description of the monitoring, record keeping, and reporting requirements and test methods; and,
- 4) any additional information required by 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 MassDEP. The report shall be submitted in compliance with the submission requirements below.

The compliance certification and report shall describe:

- 1) The terms and conditions of the permit that are the basis of the certification;
- 2) The current compliance status during the reporting period;
- 3) The methods used for determining compliance, including a description of the monitoring, record keeping, and reporting requirements and test methods;
- 4) Whether there were any deviations during the reporting period;
- 5) If there were any outstanding deviations at the time of reporting, and the Corrective Action Plan to remedy said deviation;

- 6) Whether deviations in the reporting period were previously reported;
- 7) If there were any outstanding deviations at the time of reporting, the proposed date of return to compliance;
- 8) If the deviations in the reporting period have returned to compliance and date of such return to compliance; and,
- 9) Any additional information required by MassDEP to determine the compliance status of the source.

11. <u>NONCOMPLIANCE</u>

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 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 permit, the terms and conditions of this permit control.

- B. 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:
 - 1) The liability of the source for any violation of applicable requirements prior to or at the time of permit issuance.
 - 2) The applicable requirements of the Acid Rain Program, consistent with 42 U.S.C. §7401, §408(a); or,
 - 3) The ability of EPA to obtain information under 42 U.S.C. §7401, §114 or §303 of the Act.

13. <u>ENFORCEMENT</u>

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 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. <u>PERMIT TERM</u>

This permit shall expire on the date specified on the cover page of this permit, which shall not be later than the date five (5) years after the 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. <u>PERMIT RENEWAL</u>

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

In the event 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 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. <u>REOPENING FOR CAUSE</u>

This permit may be modified, revoked, reopened, and reissued, or terminated for cause by MassDEP and/or EPA. The responsible official of the facility may request that MassDEP terminate the facility's Operating Permit for cause. 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.

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17. DUTY TO PROVIDE INFORMATION

Upon 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 MassDEP copies of records that the Permittee is required to retain by this permit.

18. <u>DUTY TO SUPPLEMENT</u>

The Permittee, upon becoming aware that any relevant facts were omitted or that 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 MassDEP a material error or omission in any records, reports, plans, or other documents previously provided to 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, liability between current and new Permittee has been submitted to 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 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. <u>PERMIT AVAILABILITY</u>

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 MassDEP or EPA.

23. <u>SEVERABILITY CLAUSE</u>

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. <u>EMERGENCY CONDITIONS</u>

The Permittee shall be shielded from enforcement action brought for noncompliance with technology based⁽¹⁾ emission limitations specified in this permit as a result of an emergency⁽²⁾. 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,

⁽¹⁾ 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.

⁽²⁾ An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, 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.

D. The Permittee submitted notice of the emergency to 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, 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. <u>PERMIT DEVIATION</u>

Deviations are instances where any permit condition is violated and not reported as an emergency pursuant to Section No. 24 of this Operating 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 supersede the following deviation reporting requirements, if applicable.

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

- A. 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.
- B. Exceedances of parameter limits established by your Operating Permits or other approvals, where the parameter limit is identified by the permit or approval as surrogate for an emission limit.
- C. Exceedances of permit operational limitations directly correlated to excess emissions.
- D. 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.
- E. 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 Air and Waste Air Operating Permit Reporting Kit, which is available to the Permittee via 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 preventive 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 Air and Waste 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.

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26. <u>OPERATIONAL FLEXIBILITY</u>

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 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. OZONE DEPLETING SUBSTANCES

This section contains air pollution control requirements that are applicable to this facility, and the United States Environmental Protection Agency enforces these requirements.

- A. The Permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
 - 1) All containers containing a class I or class II substance that is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to 40 CFR 82.106.
 - 2) The placement of the required warning statement must comply with the requirements of 40 CFR 82.108.

- 3) The form of the label bearing the required warning statement must comply with the requirements of 40 CFR 82.110.
- 4) No person may modify, remove or interfere with the required warning statement except as described in 40 CFR 82.112.
- B. The Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVAC) in Subpart B:
 - 1) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices of 40 CFR 82.156.
 - 2) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment of 40 CFR 82.158.
 - 3) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.
 - 4) Persons disposing of small appliances, MVACs and MVAC-like appliances (as defined in 40 CFR 82.152) must comply with recordkeeping requirements of 40 CFR 82.166.
 - 5) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair equipment requirements of 40 CFR 82.156.
 - 6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
- C. If the Permittee manufactures, transforms, imports or exports a class I or class II substance, the Permittee is subject to all the requirements as specified in 40 CFR Part82, Subpart A, "Production and Consumption Controls".
- D. If the Permittee performs a service on motor (fleet) vehicles when this service involves ozonedepleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the Permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, "Servicing of Motor Vehicle Air Conditioners". The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo or system used on passenger buses using HCFC-22 refrigerant.
- E. The Permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G, "Significant New Alternatives Policy Program".

29. PREVENTION OF ACCIDENTAL RELEASES

This section contains air pollution control requirements that are applicable to this facility, and the United States Environmental Protection Agency enforces these requirements.

Your facility is subject to the requirements of the General Duty Clause, under 112(r)(1) of the CAA Amendments of 1990. This clause specifies that owners or operators of stationary sources producing, processing, handling or storing a chemical in any quantity listed in 40 CFR Part 68 or any other extremely hazardous substance have a general duty to identify hazards associated with these substances and to design, operate and maintain a safe facility, in order to prevent releases and to minimize the consequences of accidental releases which may occur.

APPEAL CONDITIONS FOR OPERATING PERMIT

This permit is an action of 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 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.

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.