



Connecticut Department of
**ENERGY &
ENVIRONMENTAL
PROTECTION**

**BUREAU OF AIR MANAGEMENT
TITLE V OPERATING PERMIT**

Issued pursuant to Title 22a of the Connecticut General Statutes (CGS) and Section 22a-174-33 of the Regulations of Connecticut State Agencies (RCSA) and pursuant to the Code of Federal Regulations (CFR), Title 40, Part 70.

Title V Permit Number	105-0063-TV
Client/Sequence/Town/Premises Numbers	7741/0005/105/014
Date Issued	December 6, 2018
Expiration Date	December 6, 2023

Corporation:

Devon Power LLC

Premises Location:

734 Naugatuck Avenue, Milford, CT 06461

Name of Responsible Official and Title:

Nick Volturno, Plant Manager

All the following attached pages, 2 through 49, are hereby incorporated by reference into this Title V permit.

/s/ Tracy Babbidge for
Robert E. Kaliszewski
Deputy Commissioner

12/6/2018
Date

TABLE OF CONTENTS

	PAGE
List of Abbreviations/Acronyms	4
Section I. Premises Information/Description	
A. Premises Information.....	5
B. Premises Description.....	5
Section II. Emissions Units Information	
A. Emissions Units Description - Table II.A.....	6
B. Operating Scenario Identification - Table II.B	8
Section III. Applicable Requirements and Compliance Demonstration	
A. Emissions Unit 7.....	9
B. Grouped Emissions Unit 4.....	13
C. Alternate NOx RACT Compliance	20
D. Grouped Emissions Unit 5	26
E. Federal Acid Rain Permit Requirements	35
F. Premises-Wide General Requirements	38
Section IV. Compliance Schedule - Table IV	40
Section V. State Enforceable Terms and Conditions	41
Section VI. Title V Requirements	
A. Submittals to the Commissioner & Administrator.....	43
B. Certifications [RCSA §22a-174-33(b)].....	43
C. Signatory Responsibility [RCSA §22a-174-2a(a)]	43
D. Additional Information [RCSA §§22a-174-33(j)(1)(X), -33(h)(2)].....	44
E. Monitoring Reports [RCSA §22a-174-33(o)(1)]	44
F. Premises Records [RCSA §22a-174-33(o)(2)]	45
G. Progress Reports [RCSA §22a-174-33(q)(1)].....	45
H. Compliance Certifications [RCSA §22a-174-33(q)(2)].....	46
I. Permit Deviation Notifications [RCSA §22a-174-33(p)]	46
J. Permit Renewal [RCSA §22a-174-33(j)(1)(B)].....	46
K. Operate in Compliance [RCSA §22a-174-33(j)(1)(C)]	46
L. Compliance with Permit [RCSA §22a-174-33(j)(1)(G)]	46
M. Inspection to Determine Compliance [RCSA §22a-174-33(j)(1)(M)].....	47
N. Permit Availability.....	47
O. Severability Clause [RCSA §22a-174-33(j)(1)(R)]	47
P. Need to Halt or Reduce Activity [RCSA §22a-174-33(j)(1)(T)].....	47
Q. Permit Requirements [RCSA §22a-174-33(j)(1)(V)]	47
R. Property Rights [RCSA §22a-174-33(j)(1)(W)].....	47
S. Alternative Operating Scenario Records [RCSA §22a-174-33(o)(3)]	47
T. Operational Flexibility and Off-Permit Changes [RCSA §22a-174-33(r)(2)]	48
U. Information for Notification [RCSA §22a-174-33(r)(2)(A)]	48
V. Transfers [RCSA §22a-174-2a(g)]	48
W. Revocation [RCSA §22a-174-2a(h)]	48
X. Reopening for Cause [RCSA §22a-174-33(s)]	49
Y. Credible Evidence.....	49

Title V Operating Permit

All conditions in Sections III, IV, and VI of this Title V permit are enforceable by both the Administrator and the commissioner unless otherwise specified. Applicable requirements and compliance demonstration are set forth in Section III of this Title V permit. The Administrator or any citizen of the United States may bring an action to enforce all permit terms or conditions or requirements contained in Sections III, IV, and VI of this Title V permit in accordance with the Clean Air Act, as amended.

Section I: Premises Information/Description

LIST OF ABBREVIATIONS/ACRONYMS

<i>Abbreviation/Acronym</i>	<i>Description</i>
AEL	Allowable Emission Limit
ASC	Actual Stack Concentration
Btu	British Thermal Units
CEM	Continuous Emission Monitor
CAIR	Clean Air Interstate Rule
CFR	Code of Federal Regulations
CGS	Connecticut General Statutes
CO	Carbon Monoxide
COMS	Continuous Opacity Monitoring System
DERC	Discrete Emission Reduction Credit
EU	Emissions Unit
EPA	Environmental Protection Agency
°F	Degrees Fahrenheit
FLER	Full Load Emission Rate
ft ³	Cubic Feet
gal	Gallons
GEU	Grouped Emissions Unit
HAP	Hazardous Air Pollutant
ISO-NE	ISO-New England
hr	Hour
lb	Pound
m ³	Cubic meter
MMBtu	Million Btu
MW	Megawatt
NO _x	Nitrogen Oxides
NSR	New Source Review
O ₂	Oxygen
Pb	Lead
PM ₁₀	Particulate Matter less than 10 microns
PM _{2.5}	Particulate Matter less than 2.5 microns
ppm	Parts per million
ppmvd	Parts per million, volumetric basis dry
RCSA	Regulations of Connecticut State Agencies
SCR	Selective Catalytic Reduction
scf	Standard Cubic Feet
SIC	Standard Industrial Classification Code
SO ₂	Sulfur Dioxide
SOS	Standard Operating Scenario
SO _x	Sulfur Oxides
TA&O	Trading Agreement and Order
ug	micro gram
ULSD	Ultra-Low Sulfur Distillate
VOC	Volatile Organic Compound
yr	year

Section I: Premises Information/Description

A. PREMISES INFORMATION

Nature of Business: Electric Power Generation
Primary SIC: 4911
Other SIC: none

Facility Mailing Address: Devon Power, LLC, 734 Naugatuck Avenue, Milford, CT 06461
Telephone Number: (203) 854-2512

B. PREMISES DESCRIPTION

Devon Power LLC is located on Naugatuck Avenue in the Devon section of Milford, Connecticut. The station produces electricity for sale. The station consists of nine combustion turbines (Units 10-18) for the production of electricity. The total electrical output from the station is 380 megawatts (MW).

(EU-7)

Unit 10 is an oil fired 20 MW Pratt & Whitney FT4A-8 combustion turbine. It is located south of the main power plant building. The unit is subject to the requirements of Trading Agreement and Order No. 8366A (TA&O No. 8366A) for compliance with RCSA §22a-174-22e.

(GEU-4)

Units 11-14 are each 40 MW General Electric LM6000PA dual fuel fired combustion turbines. They are located north of the main power plant building each with its own stack. Water injection is employed for NOx control on all four units. These units are subject to 40 CFR Part 60 Subpart GG, Standards of Performance for Stationary Combustion Turbines. These units are subject to the requirements of TA&O No. 8366A for compliance with RCSA §22a-174-22e.

Units 11-14 are Phase II Acid Rain Sources and their CEM system has been certified in accordance with 40 CFR Part 75.

(GEU-5)

Units 15-18 are each 50 MW General Electric LM6000PC dual fuel fired combustion turbines placed into service in June and July 2010. They are located north of the main power plant building. These units utilize water injection, selective catalytic reduction (SCR) and oxidation catalyst to control NOx, CO and VOC. These units are subject to 40 CFR Part 60 Subpart KKKK. The emission rates for SOx and NOx in the NSR permits are below the limitations outlined in Subpart KKKK.

Units 15-18 are Phase II Acid Rain sources and their CEM system is certified in accordance with 40 CFR Part 75.

Section II: Emissions Units Description

A. EMISSIONS UNITS DESCRIPTION

Emissions units are set forth in Table II.A. It is not intended to incorporate by reference these NSR Permits, Orders or Regulations into this Title V permit.

TABLE II.A: EMISSIONS UNITS DESCRIPTION			
Emissions Unit	Emissions Unit Description	Control Unit Description	Permit, Order or Regulation Number
EU-7	Pratt & Whitney 20 MW Combustion Turbine Model FT4A-8LF, Unit 10 Constructed 04/1985	None	P105-0026 TA&O No. 8366A RCSA §22a-174-19a RCSA §22a-174-22c RCSA §22a-174-22e
EU-8	General Electric 40 MW Combustion Turbine Model LM6000PA, Unit 11 Constructed May 1996	Water Injection	P105-0040 TA&O No. 8366A RCSA §22a-174-19a RCSA §22a-174-22c RCSA §22a-174-22e 40 CFR Parts 72-78 40 CFR Part 60 Subpart GG
EU-9	General Electric 40 MW Combustion Turbine Model LM6000PA, Unit 12 Constructed May 1996	Water Injection	P105-0041 TA&O No. 8366A RCSA §22a-174-19a RCSA §22a-174-22c RCSA §22a-174-22e 40 CFR Parts 72-78 40 CFR Part 60 Subpart GG
EU-10	General Electric 40 MW Combustion Turbine Model LM6000PA, Unit 13 Constructed May 1996	Water Injection	P105-0042 TA&O No. 8366A RCSA §22a-174-19a RCSA §22a-174-22c RCSA §22a-174-22e 40 CFR Parts 72-78 40 CFR Part 60 Subpart GG
EU-11	General Electric 40 MW Combustion Turbine Model LM6000PA, Unit 14 Constructed May 1996	Water Injection	P105-0043 TA&O No. 8366A RCSA §22a-174-19a RCSA §22a-174-22c RCSA §22a-174-22e 40 CFR Parts 72-78 40 CFR Part 60 Subpart GG

Section II: Emissions Units Description

EU-12	General Electric 50 MW Combustion Turbine Model LM6000PC, Unit 15 Constructed May 2009	Water Injection, SCR, Oxidation Catalyst	P105-0098 RCSA §22a-174-19a RCSA §22a-174-22c RCSA §22a-174-22e 40 CFR Parts 72-78 40 CFR Part 60 Subpart K K K K
EU-13	General Electric 50 MW Combustion Turbine Model LM6000PC, Unit 16 Constructed May 2009	Water Injection, SCR, Oxidation Catalyst	P105-0099 RCSA §22a-174-19a RCSA §22a-174-22c RCSA §22a-174-22e 40 CFR Parts 72-78 40 CFR Part 60 Subpart K K K K
EU-14	General Electric 50 MW Combustion Turbine Model LM6000PC, Unit 17 Constructed May 2009	Water Injection, SCR, Oxidation Catalyst	P105-0100 RCSA §22a-174-19a RCSA §22a-174-22c RCSA §22a-174-22e 40 CFR Parts 72-78 40 CFR Part 60 Subpart K K K K
EU-15	General Electric 50 MW Combustion Turbine Model LM6000PC, Unit 18 Constructed May 2009	Water Injection, SCR, Oxidation Catalyst	P105-0101 RCSA §22a-174-19a RCSA §22a-174-22c RCSA §22a-174-22e 40 CFR Parts 72-78 40 CFR Part 60 Subpart K K K K
TABLE II.A.1: GROUPED EMISSIONS UNIT DESCRIPTION			
Emissions Units	Emissions Unit Description	Control Unit Description	Permit, Order or Regulation Number
GEU-4	EU-8 through EU-11	See above	See above
GEU-5	EU-12 through EU-15	See above	See above

Section II: Emissions Units Description

B. OPERATING SCENARIO IDENTIFICATION

The Permittee shall be allowed to operate under the following Standard Operating Scenarios (SOS) without notifying the commissioner, provided that such operations are explicitly provided for and described in Table II.B.

TABLE II.B: OPERATING SCENARIO IDENTIFICATION	
Emissions Units Associated with the Scenario	Description of Scenario
All Emissions Units	All emissions units associated with SOS shall be operated in accordance with applicable permit or registration terms and conditions and in accordance with best management practices while combusting liquid fuels or natural gas as allowed.

Section III: Applicable Requirements and Compliance Demonstration

The following contains summaries of applicable regulations and compliance demonstration for each identified Emissions Unit regulated by this Title V permit.

A. EMISSIONS UNIT 7 (EU-7): Pratt & Whitney Model FT4A-8LF 20 MW (nominal) Gas Turbine; NSR Permit No. 105-0026; TA&O No. 8366A; RCSA §§22a-174-19a, 22c, 22e

1. Allowable Fuel Use

a. Limitation or Restriction [P105-0026]

i. Ultra-Low Sulfur Distillate Oil (ULSD)

HHV = 0.135 MMBtu/gal

(A) Maximum Fuel Consumption over any Consecutive 12 Month Period (gal):
 1.06×10^6

(B) Maximum Distillate Fuel Sulfur Content (% by weight): 0.0015

b. Monitoring Requirements [P105-0026]

The Permittee shall use individual non-resettable totalizing fuel metering devices or billing meters to continuously monitor fuel feed to the turbine.

c. Record Keeping Requirements [P105-0026]

- i. The Permittee shall keep records of monthly and consecutive 12 month fuel consumption. The consecutive 12 month fuel consumption shall be determined by adding the current month's fuel consumption to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month.
- ii. The Permittee shall keep records of the fuel certification for each delivery of fuel oil from a bulk petroleum provider or a copy of the current contract with the fuel supplier supplying the fuel used by the equipment that includes the applicable sulfur content of the fuel as a condition of each shipment. The shipping receipt or contract shall include the date of delivery, the name of the fuel supplier, type of fuel delivered, the percentage of sulfur in such fuel, by weight, dry basis, and the method used to determine the sulfur content of such fuel.

d. Reporting Requirements

The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is earlier. [RCSA §22a-174-33(j)(1)(X)]

2. NOx Emissions

a. Limitation or Restriction

The Permittee shall not exceed the following emissions limitations, unless allowed by the alternate NOx compliance in Section III.A.2.a of this Title V permit:

- i. Less than or equal to 0.74 lb/MMBtu [P105-0026]
- ii. Less than or equal to 75 ppmvd (0.29 lb/MMBtu)
[RCSA §22a-174-22e(d)(4)(A)]
- iii. Less than or equal 50 ppmvd or 0.19 lb/MMBtu (5 month average) during the period from May 1 through September 30, inclusive. [RCSA §22a-174-22e(d)(4)(B)]

Section III: Applicable Requirements and Compliance Demonstration

- iv. Less than or equal 0.15 lb/MMBtu (7 month average) during the period from October 1 through April 30, inclusive.

[RCSA §22a-174-22e(d)(4)(B)]

- v. Less than or equal to 53.7 tons/year [P105-0026]

b. Monitoring Requirements

- i. The Permittee shall conduct NO_x emission tests of the unit at least once every five years from the date of the previous stack test. [P105-0026; RCSA §22a-174-22e(l)]
- ii. For the purposes of stack testing the maximum fuel firing rate may be calculated using the following equation: [P105-0026]

Maximum Fuel Firing Rate (gal/hr):

$$X = -4.1099(Y) + 2122.4$$

Where,

X = fuel flow in gallons/hour

Y = Ambient Temperature (⁰F)

- iii. The Permittee shall comply with the applicable monitoring requirements specified in RCSA §22a-174-22e(m).

c. Record Keeping Requirements

- i. Demonstration of compliance with the emission limits in Section III.A.2.a of this Title V permit shall be met by using the emission factor from the most recent stack test data. [P105-0026]
- ii. The Permittee shall make and keep records of the monthly and consecutive 12 month NO_x emissions in units of tons. The consecutive 12 month emissions shall be determined by adding the current month's emissions to that of the previous 11 months. NO_x emissions shall be calculated using the latest approved stack test results. Such records shall include a sample calculation. The Permittee shall make these calculations within 30 days of the end of the previous month. [P105-0026]
- iii. The Permittee shall comply with the applicable record keeping requirements specified in RCSA §22a-174-22e(j). [P105-0026]

d. Reporting Requirements

- i. The Permittee shall comply with the applicable reporting requirements specified in RCSA §22a-174-22e(k).
- ii. The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is earlier. [RCSA §22a-174-33(j)(1)(X)]

3. CAIR NO_x Ozone Season Trading Program

Emissions Unit 7 (EU-7) is a CAIR NO_x Ozone season unit and therefore subject to RCSA §22a-174-22c. The unit shall comply with all applicable requirements stated in RCSA §22a-174-22c and the standard requirements of the CAIR permit application.

Section III: Applicable Requirements and Compliance Demonstration

4. Pollutant Emissions

a. Limitation or Restriction

i. The Permittee shall not exceed the following emissions:

(A) PM₁₀/PM_{2.5}

(1) 1.2E-02 lb/MMBtu

(2) 0.86 tons/yr

(B) SO₂:

(1) 1.5E-03 lb/MMBtu

(2) 0.11 tons/yr

(C) VOC:

(1) 4.1E-04 lb/MMBtu

(2) 0.03 tons/yr

(D) CO:

(1) 3.3E-03 lb/MMBtu

(2) 0.24 tons/yr

(E) Pb:

(1) 1.4E-05 lb/MMBtu

(2) 1.03E-3 tons/yr

b. Monitoring Requirements

Record keeping specified in Section III.A.4.c of this Title V permit shall be sufficient to meet other Monitoring Requirements pursuant to RCSA §22a-174-33.

[RCSA §22a-174-33(j)(1)(K)(ii)]

c. Record Keeping Requirements

i. Demonstration of compliance with the emission limits in Section III.A.4.a of this Title V permit shall be met by using the following sources: [P105-0026]

(A) SO_x: Calculated from 0.0015% S or less in fuel oil

(B) PM₁₀/PM_{2.5}, CO, VOC, Pb: AP-42, Tables 3.1-1 and 3.1-2a, dated 04/00

ii. The Permittee shall calculate and record the monthly and consecutive 12 month PM₁₀/PM_{2.5}, SO₂, VOC, CO, and Pb emissions in units of tons. The consecutive 12 month emission shall be determined by adding (for each pollutant) the current month's emissions to that of the previous 11 months. NO_x emissions shall be calculated using the latest approved stack test results. Such records shall include a sample calculation for each pollutant. The Permittee shall make these calculations within 30 days of the end of the previous month.

[P105-0026]

iii. The Permittee shall make and keep the applicable records pursuant to RCSA §22a-174-19a(i). [P105-0026]

Section III: Applicable Requirements and Compliance Demonstration

d. Reporting Requirements

- i. The Permittee shall submit reports of SO₂ emissions in accordance with RCSA §22a-174-19a(j). [P105-0026]
- ii. The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is earlier. [RCSA §22a-174-33(j)(1)(X)]

5. Opacity

a. Limitation or Restriction

This equipment shall not exceed 20% opacity during any six minute block average as measured by 40 CFR Part 60, Appendix A, Reference Method 9. [P105-0026]

b. Monitoring Requirements

Testing shall be conducted using EPA Method 9 (or equivalent EPA approved Method). Recurring tests shall be every five years and concurrent with the required NO_x testing.

[RCSA §22a-174-33(j)(1)(K)(ii)]

c. Record Keeping Requirements

The Permittee shall maintain records of the dates and times of all opacity testing including the operating conditions at the time of the test.

[RCSA §22a-174-33(j)(1)(K)]

d. Reporting Requirements

The Permittee shall submit reports of opacity testing within 30 days of such test.

[RCSA §22a-174-33(j)(1)(X)]

6. Turbine Operation and Maintenance

a. Limitation or Restriction [P105-0026]

- i. The Permittee shall operate and maintain this equipment in accordance with good engineering practice and industry standards.
- ii. The Permittee shall operate and maintain this equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.
- iii. The Permittee shall immediately institute a shutdown of the turbine in the event of a malfunction that cannot be correct within three hours.

b. Monitoring Requirements

Record keeping specified in Section III.A.6.c of this Title V permit shall be sufficient to meet other Monitoring Requirements pursuant to RCSA §22a-174-33.

[RCSA §22a-174-33(j)(1)(K)(ii)]

c. Record Keeping Requirement [P105-0026]

- i. The Permittee shall keep records, when the turbine or gas generator is changed for routine maintenance, to include the following:
 - (A) The date the turbine or gas generator was changed,

Section III: Applicable Requirements and Compliance Demonstration

- (B) The reason for the change,
 - (C) Documentation that the replacement turbine or gas generator is the same make and model number, and
 - (D) Documentation that the replacement turbine or gas generator does not result in an increase in emissions, the emission of any new air pollutants, or an increase in the electrical output of the turbine.
- ii. The Permittee shall maintain records sufficient to determine compliance with the limitation or restriction in Section III.B.6.a of this Title V permit.

[RCSA §22a-174-33(j)(1)(K)]

d. Reporting Requirements

The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is earlier. [RCSA §22a-174-33(j)(1)(X)]

7. Trading Agreement and Order No. 8366A

See Section III.C of this Title V permit.

B. GROUPED EMISSIONS UNIT 4 (GEU-4): Four GE LM6000PA 40 MW Gas Turbines, NSR Permit Nos. 105-0040, 105-0041, 105-0042, and 105-0043; TA&O No. 8366A (non-ozone season only); 40 CFR Part 60 Subpart GG; RCSA §§22a-174-19a, 22c, 22e

1. Allowable Fuel Usage [P105-0040, 105-0041, 105-0042, 105-0043]

a. Limitation or Restriction

- i. Distillate Oil (Jet Fuel)
 - (A) 2,920 gallons/hour per turbine
 - (B) Less than or equal to 2,426,520 gallons over any Consecutive Twelve Months
 - (C) Maximum Fuel Sulfur Content (% by weight): 0.04
 - (D) GEU-4 shall not operate more than a combined 72 hours/day on distillate fuel or operate more than a combined 56 hours/day on distillate fuel during the calendar month of July.
 - (E) Maximum Heat Input (MMBtu/hr): 400.0 per turbine
- ii. Natural Gas
 - (A) 400,000 ft³/hr per turbine
 - (B) Less than or equal to 1,616.4 million ft³ over any Consecutive Twelve Months
 - (C) Maximum Heat Input (MMBtu/hr): 400.0 per turbine

b. Monitoring Requirements

- i. When more than one fuel supply tank is to service GEU-4 or when multiple sources are supplied by one fuel tank, the Permittee shall use a non-resettable totalizing fuel metering device to continuously monitor fuel feed to this permitted source.
[P105-0040, 105-0041, 105-0042, 105-0043]
- ii. Metering devices shall be used to continuously monitor the fuel flow and the water injected into GEU-4. [P105-0040, 105-0041, 105-0042, 105-0043]

Section III: Applicable Requirements and Compliance Demonstration

c. Record Keeping Requirements

- i. The Permittee shall keep records of annual fuel consumption. Annual fuel consumption shall be based on any consecutive 12 month time period and shall be determined by adding (for each fuel) the current month's fuel usage to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month.
[P105-0040, 105-0041, 105-0042, 105-0043]
- ii. The Permittee shall keep records of the fuel certification for each delivery of fuel oil from a bulk petroleum provider or a copy of the current contract with the fuel supplier supplying the fuel used by the equipment that includes the applicable sulfur content of the fuel as a condition of each shipment. The shipping receipt or contract shall include the date of delivery, the name of the fuel supplier, type of fuel delivered, the percentage of sulfur in such fuel, by weight, dry basis, and the method used to determine the sulfur content of such fuel.
[P105-0040, 105-0041, 105-0042, 105-0043]
- iii. The Permittee shall maintain daily records of the hours of operation for GEU-4 combined, along with the type of fuel and total hours by fuel for each turbine.
[RCSA §22a-174-33(j)(1)(K)(ii)]

d. Reporting Requirements

The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is earlier. [RCSA §22a-174-33(j)(1)(X)]

2. NOx Emissions

a. Limitation or Restriction [P105-0040, 105-0041, 105-0042, 105-0043]

All emission rate limits are per turbine, unless otherwise indicated.

The Permittee shall not exceed the following emissions limitations, unless allowed by alternate NOx compliance in Section III.B.2.a of this Title V permit:

- i. Distillate Oil
 - (A) 70.0 lb/hr
 - (B) 0.175 lb/MMBtu
 - (C) 45 ppm
 - (D) 75 ppmvd (0.29 lb/MMBtu)
[RCSA §22a-174-22e(d)(4)(A)]
 - (E) Less than or equal 50 ppmvd or 0.19 lb/MMBtu (5 month average) during the period from May 1 through September 30, inclusive.
[RCSA §22a-174-22e(d)(4)(B)]
 - (F) Less than or equal 0.15 lb/MMBtu (7 month average) during the period from October 1 through April 30, inclusive.
[RCSA §22a-174-22e(d)(4)(B)]

Section III: Applicable Requirements and Compliance Demonstration

- ii. Natural Gas
 - (A) 36.0 lb/hr
 - (B) 0.090 lb/MMBtu
 - (C) 25 ppm
 - (D) 55 ppmvd (0.29 lb/MMBtu)
[RCSA §22a-174-22e(d)(4)(A)]
 - (E) Less than or equal 50 ppmvd or 0.19 lb/MMBtu (5 month average) during the period from May 1 through September 30, inclusive.
[RCSA §22a-174-22e(d)(4)(B)]
 - (F) Less than or equal 0.15 lb/MMBtu (7 month average) during the period from October 1 through April 30, inclusive.
[RCSA §22a-174-22e(d)(4)(B)]
- iii. Annual Emissions shall not exceed:
 - (A) 145.5 tons/yr
 - (B) 582 tons/yr combined emissions for GEU-4
- iv. The Permittee shall comply with the standard for nitrogen oxides found in 40 CFR §60.332(a).

b. Monitoring Requirements

- i. NO_x Emissions monitoring shall be performed using the method outlined in 40 CFR Part 75. [P105-0040, 105-0041, 105-0042, 105-0043]
- ii. The Permittee shall conduct stack testing at least once every five years.
[P105-0040, 105-0041, 105-0042, 105-0043; RCSA §22a-174-22e(l)]
- iii. The Permittee shall comply with the applicable monitoring requirements in 40 CFR §60.334.
- iv. The Permittee shall continuously monitor the water injected into GEU-4.
[P105-0040, 105-0041, 105-0042, 105-0043]

c. Record Keeping Requirements

- i. The Permittee shall maintain records of all CEM data, stack test results and calculations demonstrating compliance with the limitation or restriction in Section III.B.2.a of this Title V permit.
[RCSA §22a-174-33(j)(1)(K)]
- ii. For each tune-up, repairs, replacement of parts and other maintenance, such records shall include the following: [RCSA §22a-174-22e(j)(2)(E)]
 - (A) The date on which the emissions unit is tuned-up;
 - (B) The name, title and affiliation of the person performing the tune-up; and
 - (C) A description of work performed, including the procedures used to inspect and perform adjustments.

Section III: Applicable Requirements and Compliance Demonstration

- iii. All documents, other records or reports required by an order or permit by the commissioner.

[RCSA §§22a-174-22e(j)(F) & (G)]

- iv. The dates, times, and places of all emission testing required by RCSA §22a-174-22e(j)(2)(C), the persons performing the measurements, the testing methods used, the operating conditions at the time of testing, and the results of such testing.

[RCSA §22a-174-22e(j)(2)(C)]

d. Reporting Requirements

- i. The Permittee shall submit a written report to the commissioner of any testing results within 60 days of the completion of such NO_x test. [RCSA §22a-174-22e(k)(1)]
- ii. The Permittee shall submit all applicable records pursuant to 40 CFR §60.7(c).

3. CAIR NO_x Ozone Season Trading Program

Grouped Emissions Unit 4 (GEU-4) is comprised of CAIR NO_x Ozone season units and therefore are subject to RCSA §22a-174-22c. The units shall comply with all applicable requirements stated in RCSA §22a-174-22c and the standard requirements of the CAIR permit application.

4. Sulfur Oxide (SO_x) and Sulfur Dioxide (SO₂) Emissions

- a. *Limitation or Restriction* [P105-0040, 105-0041, 105-0042, 105-0043]

All emission rate limits are per turbine, unless otherwise indicated.

The Permittee shall not exceed the following emissions limitations:

- i. Distillate Oil
 - (A) 16.0 lb/hour
 - (B) 0.040 lb/MMBtu
- ii. Natural Gas
 - (A) 0.24 lb/hour
 - (B) 0.0006 lb/MMBtu
- iii. Annual Emissions
 - (A) 6.651 tons/yr
 - (B) 26.604 tons/yr combined emissions for GEU-4
- iv. The Permittee shall: [RCSA §22a-174-19a]
 - (A) Combust liquid fuel, gaseous fuel or a combination of each provided that each fuel possess a fuel sulfur limit of equal to or less than 0.3 % sulfur, by weight (dry basis);
 - (B) Meet an average emission rate of equal to or less than 0.33 pounds SO₂ per MMBtu for each calendar quarter for an affected unit at the premises; or
 - (C) Meet an average emission rate of equal to or less than 0.3 pounds SO₂ per MMBtu calculated for each calendar quarter, if such owner or operator averages the emissions from two or more affected units at the premises.
- v. The Permittee shall comply with the SO₂ emission limitation found in 40 CFR §60.333.

Section III: Applicable Requirements and Compliance Demonstration

b. Monitoring Requirements

- i. The Permittee shall monitor the sulfur dioxide emissions in accordance with 40 CFR Part 75 Acid Rain CEM guidelines. [RCSA §22a-174-33(j)(1)(K)(ii)]
- ii. The Permittee shall comply with the monitoring requirements found in 40 CFR §60.334.

c. Record Keeping Requirements

- i. The Permittee shall maintain records sufficient to determine compliance with the limitation or restriction in Section III.B.4.a of this Title V permit.
[RCSA §22a-174-33(j)(1)(K)]
- ii. The Permittee shall maintain records sufficient to determine compliance with the applicable sulfur dioxide emission limitation in 40 CFR §60.333(b).

d. Reporting Requirements

- i. The Permittee shall submit reports of SO₂ emissions in accordance with the requirements of the Acid Rain permit in Section III.E of this Title V permit and RCSA §22a-174-19a(j).
- ii. The Permittee shall submit all applicable records pursuant to 40 CFR §60.7(c).

5. PM₁₀, VOC, and CO Emissions

a. Limitation or Restriction [P105-0040, 105-0041, 105-0042, 105-0043]

- i. The Permittee shall not exceed the following emissions for each unit:

(A) PM₁₀:

- (1) Distillate Oil
 - (a) 11.6 lb/hr
 - (b) 0.029 lb/MMBtu
- (2) Natural Gas
 - (a) 5.20 lb/hr
 - (b) 0.013 lb/MMBtu
- (3) Annual Emissions
21.01 tons/yr

(B) VOC

- (1) Distillate Oil
 - (a) 1.52 lb/hr
 - (b) 0.004 lb/MMBtu
- (2) Natural Gas
 - (a) 4.00 lb/hr
 - (b) 0.010 lb/MMBtu
- (3) Annual Emissions
16.17 tons/yr

Section III: Applicable Requirements and Compliance Demonstration

(C) CO

- (1) Distillate Oil
 - (a) 19.2 lb/hr
 - (b) 0.048 lb/MMBtu
- (2) Natural Gas
 - (a) 46.0 lb/hr
 - (b) 0.115 lb/MMBtu
- (3) Annual Emissions
92.95 tons/yr

b. Monitoring Requirements

The Permittee shall conduct stack testing for VOC/HC, CO, and O₂ at least once every five years from the date of the last stack test.

[P105-0040, 105-0041, 105-0042, 105-0043]

c. Record Keeping Requirements

The Permittee shall maintain records sufficient to determine compliance with the limitation or restriction in Section III.B.5.a of this Title V permit.

[RCSA §22a-174-33(j)(1)(K)]

d. Reporting Requirements

- i. The Permittee shall submit a written report to the commissioner of any testing results for CO and VOC/HC within 30 days of the completion of such test.

[RCSA §22a-174-33(j)(1)(X)]

- ii. The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is earlier.

[RCSA §22a-174-33(j)(1)(X)]

6. Formaldehyde and Sulfuric Acid Emissions

a. Limitation or Restriction [P105-0040, 105-0041, 105-0042, 105-0043]

- i. Actual Stack Concentration (ASC), regardless of fuel, shall not exceed:

(A) Formaldehyde: 644 $\mu\text{g}/\text{m}^3$

(B) Sulfuric Acid: 80 $\mu\text{g}/\text{m}^3$

b. Monitoring Requirements

Record keeping specified in Section III.B.6.c of this Title V permit shall be sufficient to meet other Monitoring Requirements pursuant to RCSA §22a-174-33.

[RCSA §22a-174-33(j)(1)(K)(ii)]

c. Record Keeping Requirements

The Permittee shall maintain records sufficient to determine compliance with the limitation or restriction in Section III.B.6.a of this Title V permit. [RCSA §22a-174-33(j)(1)(K)]

Section III: Applicable Requirements and Compliance Demonstration

d. Reporting Requirements

The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is earlier.

[RCSA §22a-174-33(j)(1)(X)]

7. Opacity

a. Limitation or Restriction

- i. The Permittee shall not exceed the following visible emissions limits: All emission rate limits are per turbine regardless of fuel.

(A) 20% opacity during any six-minute block average; or

[RCSA §22a-174-18(b)(2)(A)]

(B) 40% opacity as measured by 40 CFR Part 60 reduced to a one-minute block average.

[RCSA §22a-174-18(b)(2)(B)]

b. Monitoring Requirements

- i. The Permittee shall continuously monitor the opacity of the stack exhaust with a COMS. Opacity data shall be monitored and recorded continuously with the COMS.

[P105-0040, 105-0041, 105-0042, 105-0043]

- ii. The Permittee shall operate and maintain installed opacity COMS equipment in accordance with subsections RCSA §§22a-174-4(c)(3) and (c)(4).

c. Record Keeping Requirements

The Permittee shall maintain records sufficient to determine compliance with the limitation or restriction in Section III.B.7.a of this Title V permit.

[RCSA §22a-174-33(j)(1)(K)]

d. Reporting Requirements

- i. Each calendar quarter, the Permittee shall comply with the reporting requirements in RCSA §22a-174-4(d)(4).

- ii. Submissions made to comply with RCSA §22a-174-4(d)(4) shall be made no later than 30 days following the end of each calendar quarter. [RCSA §22a-174-4(d)(5)]

8. Trading Agreement and Order No. 8366A

See Section III.C of this Title V permit.

9. 40 CFR Part 60 Subpart GG

The Permittee shall comply with the New Source Performance Standard for Stationary Gas Turbines as specified in 40 CFR Part 60 Subpart GG.

Section III: Applicable Requirements and Compliance Demonstration

C. Alternate NO_x RACT Compliance: EU-7 and GEU-4

a. Limitation or Restriction

- i. The Permittee may only use emissions trading, subject to the provisions of TA&O No. 8366A, until the date of the expiration of TA&O No. 8366A. The date of expiration of TA&O No. 8366A shall be the earlier of:
[TA&O No. 8366A, para. B.1]
 - (A) May 31, 2023;
 - (B) The date upon which the Permittee demonstrates to the commissioner's satisfaction that actual NO_x emissions from the emission units, at all times, do not exceed the corresponding AEL;
 - (C) The date specified in any written notice from the commissioner stating that the Permittee is no longer allowed to use emissions trading due to the Permittees' violation of any provision of TA&O No. 8366A; or
 - (D) The date specified in any written notice from the commissioner, notifying the Permittee that the commissioner has determined the use of emissions trading as a compliance option has been further restricted, modified or nullified by:
 - (1) the promulgation of an Act, Statute, or Regulation; or
 - (2) the issuance of a judgment or court order.
- ii. The Permittee shall obtain and use sufficient DERCs in such a manner as to comply with Paragraphs B.7 and B.9 of TA&O No. 8366A. All DERCs used during the Ozone Season for each emissions unit described in Tables 1 and 3 of TA&O No. 8366A, shall have been generated during an Ozone Season.
[TA&O No. 8366A, para. B.2]
- iii. Vintage Restriction. For the purposes of compliance with RCSA §22a-174-22e and the provisions of TA&O No. 8366A, DERCs shall only remain valid for five calendar years from the year of the generation of such DERCs. DERCs older than five calendar years from their creation are not valid for use for compliance with RCSA §22a-174-22e and the provisions of TA&O No. 8366A. Ozone Season DERCs generated by an Affected Unit during 2013 shall remain valid until December 31, 2018.
[TA&O No. 8366A, para. B.3]
- iv. The Permittee shall not cause or allow actual NO_x emissions from the operation of the emission units described in Tables 1-3 of TA&O No. 8366A to exceed the corresponding FLERs. Compliance with the corresponding FLERs specified in Tables 1-2 shall be determined based on the results of emissions testing performed in accordance with RCSA §22a-174-22e(1) or based on NO_x emissions monitored and recorded by a continuous emissions monitoring system that was approved by the commissioner and that complies with RCSA §22a-174-4.
[TA&O No. 8366A, para. B.4]
- v. Ozone Season Fuel Use Restriction. Notwithstanding the provisions of Paragraph B.2 TA&O No. 8366A, when operating the emission units described in Tables 1-2 of TA&O No. 8366A during the Ozone Season, the Permittee shall operate those units while firing or co-firing the lowest NO_x emitting fuel type or combination of fuel types that the units are physically able to burn and that the Permittee are authorized to burn in accordance

Section III: Applicable Requirements and Compliance Demonstration

with Departmental permit, registration, or applicable regulation.

[TA&O No. 8366A, para. B.5]

- vi. Notwithstanding Paragraph B.5 of TA&O No. 8366A, during the Ozone Season, the Permittee may operate the emission units described in Tables 1 and 2 of TA&O No. 8366A on fuels that result in higher emissions of NO_x, if either:

[TA&O No. 8366A, para. B.6]

- (A) the availability of fuel oil that complies with Paragraph B.5 of TA&O No. 8366A is inadequate to meet the needs of residential, commercial and industrial users in this state and that such inadequate supply constitutes an emergency; or
 - (B) the supply of gaseous fuels to the emission units is interrupted due to inadequate supply or in accordance with an interruptible supply agreement between the Permittee and the gaseous fuel supplier; or
 - (C) the reliance on the lowest NO_x emitting fuel type or combination of fuel types would prevent a timely response to a dispatch directive issued by the Independent System Operator New England (ISO-NE) to provide electricity pursuant to obligations in the Locational Forward Reserve Market; or
 - (D) the reliance on the lowest NO_x emitting fuel type or combination of fuel types would prevent a timely response to “Real-time” activation by ISO-NE as operating or replacement reserve in accordance with the units’ designation as a “Fast Start Generator”; or
 - (E) the unit is operating in order to conduct testing required by any governmental agency or auditing/ testing required to demonstrate the ability to satisfy commitments made to ISO-NE.
- vii. DERC Use. On the first day of each calendar month, the Permittee shall possess a quantity of DERCs that equals or exceeds the quantity of Actual DERCs Required in that month. Compliance with Paragraph B.7 of TA&O No. 8366A shall be determined as follows:

[TA&O No. 8366A, para. B.7]

- (A) Before the first day of each month, the Permittee shall estimate DERCs required for such calendar month for the emission units described in Table 1 of TA&O No. 8366A as follows:

Estimated DERCs Required =

$$\frac{\{(Estimated\ fuel\ use\ in\ MMBtu) \times ((FLER\ lb/MMBtu) - (0.95 \times AEL))\}}{2000\ lb/ton}$$

Where

- AEL = Allowable Emission limit, as defined in Paragraph A.4 of TA&O No. 8366A
 - Discount (0.95) = 5% design margin applied to the AEL.
- (B) No later than the twentieth day of each month, the Permittee shall calculate actual DERCs used in the preceding calendar month for the emission units described in Tables 1 and 3 of TA&O No. 8366A as follows:

Actual DERCs Required =

Section III: Applicable Requirements and Compliance Demonstration

$$\{(\text{Monthly fuel use in MMBtu}) \times ((\text{FLER lb/MMBtu}) - (0.95 \times \text{AEL}))\} \div 2000 \text{ lb/ton}$$

- viii. Ozone Season DERC Use. In addition to the requirements of Paragraph B.7 of TA&O No. 8366A, on the first day of each Ozone Season, the Permittee shall possess a quantity of DERCs that equals or exceeds the quantity of Ozone Season Actual DERCs Required for that Ozone Season. Compliance with Paragraph B.8 of TA&O No. 8366A shall be determined as follows:

[TA&O No. 8366A, para. B.8]

- (A) Before the first day of each Ozone Season, the Permittee shall estimate DERCs required for that Ozone Season for the emission units described in Table 1 of TA&O No. 8366A based on the ozone season average actual NO_x emission rate from the emission unit as follows:

Estimated Ozone Season DERCs Required =

$$\{(\text{Estimated Ozone Season fuel use in MMBtu}) \times ((\text{FLER lb/MMBtu}) - (0.95 \times \text{AEL}))\} \div 2000 \text{ lb/ton} - \Sigma(\text{Estimated DERCs Required for all months of the Ozone Season calculated pursuant to Paragraph B.7 of TA\&O No. 8366A})$$

- (B) No later than 30 days after the end of each Ozone Season, the Permittee shall calculate Actual Ozone Season DERCs used during that Ozone Season for the emission units described in Table 1 of TA&O No. 8366A as follows:

Actual Ozone Season DERCs Required =

$$\{(\text{Actual Ozone Season fuel use in MMBtu}) \times ((\text{FLER lb/MMBtu}) - (0.95 \times \text{AEL}))\} \div 2000 \text{ lb/ton} - \Sigma(\text{Actual DERCs required for all months of the Ozone Season calculated pursuant to Paragraph B.7 of TA\&O No. 8366A})$$

Where

AEL = Ozone season average Allowable Emission Limit, as listed in Table 1 of TA&O No. 8366A.

- ix. Non-Ozone Season DERC Use. In addition to the requirements of Paragraphs B.7 and B.8 of TA&O No. 8366A on the first day of each Non-Ozone Season, the Permittee shall possess a quantity of DERCs that equals or exceeds the quantity of Non-Ozone Season Actual DERCs Required for that Non-Ozone Season. Compliance with Paragraph B.9 of TA&O No. 8366A shall be determined as follows:

[TA&O No. 8366A, para. B.9]

- (A) Before the first day of each Non-Ozone Season, the Permittee shall estimate DERCs required for that Non- Ozone Season for the emission units described in Tables 1 and 2 of TA&O No. 8366A based on the average actual NO_x emission rate from the emission unit and an emission limit of 0.15 lb/MMBtu as follows:

Estimated Non-Ozone Season DERCs Required (Tables 1 and 2 units) =

$$\{(\text{Estimated Non-Ozone Season fuel use in MMBtu}) \times ((\text{FLER lb/MMBtu}) - (0.95 \times 0.15 \text{ lb/MMBtu}))\} \div 2000 \text{ lb/ton} - \Sigma(\text{Estimated DERCs Required for all months of the Non-Ozone Season calculated pursuant to Paragraph B.7 of TA\&O No. 8366A})$$

Section III: Applicable Requirements and Compliance Demonstration

- (B) No later than 30 days after the end of each Non-Ozone Season, the Permittee shall calculate Actual Non-Ozone Season DERCs used during that Non-Ozone Season for the emission units described in Tables 1 and 2 of TA&O No. 8366A as follows:

Actual Non-Ozone Season DERCs Required (Tables 1 and 2 units) =

$\{(Actual\ Non-Ozone\ Season\ fuel\ use\ in\ MMBtu) \times ((FLER\ lb/MMBtu) - (0.95 \times 0.15\ lb/MMBtu))\} \div 2000\ lb/ton - \Sigma(Actual\ DERCs\ Required\ for\ all\ months\ of\ the\ Non-Ozone\ Season\ calculated\ pursuant\ to\ Paragraph\ B.7\ of\ TA\&O\ No.\ 8366A)$

- x. On or before January 31, of each calendar year, the Permittee shall deduct a quantity of DERCs from the current balance of DERCs possessed by the Permittee such that the total is equal to the sum of Actual DERCs Required pursuant to Paragraph B.7 and B.8 of TA&O No. 8366A for the preceding calendar year, rounded up to the nearest whole ton.
[TA&O No. 8366A, para. B.10]
- xi. Not more than 90 days after the completion of the Non-Ozone Season, the Permittee shall deduct a quantity of DERCs from the current balance of DERCs possessed by the Permittee such that the total is equal to Actual Non-Ozone Season DERCs Required for the most recently completed Non-Ozone Season.
[TA&O No. 8366A, para. B.11]
- xii. Fuel Flow Meters. The Permittee shall install, calibrate, maintain and operate a fuel flow meter to continuously monitor fuel feed and heat input to each emission unit described in Table 1 of TA&O No. 8366A.
[TA&O No. 8366A, para. B.16]
- xiii. FLER Violation. Violation of an established FLER shall subject the Permittee to make restitution by matching the quantity of emissions (“true up”) caused by the exceedance plus a 100% premium. The true up in tons of DERCs shall be equal to the FLER exceedance in lb/MMBtu, multiplied by the total heat input during the period of noncompliance divided by 2000 lb/ton. If the period of noncompliance is not known, the time period from the completion of the last/previous Department witnessed emission test through the date that FLER compliance is achieved as approved by the commissioner shall be used. Notwithstanding this requirement, exceedance of any FLER contained in Table 1 is a violation in Paragraph B.4 of TA&O No. 8366A subject to enforcement action in accordance with the Department of Energy & Environmental Protection’s Enforcement Response Policy, in effect at the time of such violation.
[TA&O No. 8366A, para. B.17]
- xiv. Emissions Testing. The Permittee shall perform emissions testing in accordance with RCSA §22a-174-22e(1) for each emission unit described in Table 1 of TA&O No. 8366A that is not equipped with a continuous emissions monitoring system that was approved by the commissioner and that complies with RCSA §22a-174-4.
[TA&O No. 8366A, para. B.19]
- b. *Maintenance and Tune-up* [TA&O No. 8366A, para. B.12.a-c]

Not more than one year from the date of issuance of TA&O No. 8366A, the Permittee shall perform maintenance and inspection of the emission units listed in Tables 1-3 of TA&O No. 8366A. Such maintenance and inspection shall include, but not be limited to, the following:

Section III: Applicable Requirements and Compliance Demonstration

- i. Inspect the combustion system, and clean or replace any components of the combustion system as necessary, in accordance with manufacturer's specification or current good engineering practice;
 - ii. Inspect the system controlling the air-to-fuel ratio, and ensure that it is calibrated and functioning in accordance with the manufacturer's specifications or current good engineering practice; and
 - iii. Measure the operating parameters of the emission unit used to determine that the emission unit is operating in accordance with manufacturer's specification or current good engineering practice prior to and after any adjustments are made during maintenance, tune-up, or inspection activity.
- c. *Record Keeping Requirements*
- i. The Permittee shall make and keep records including, but not limited to the following:
[TA&O No. 8366A, para. B.12.d]
 - (A) Demonstration that any maintenance, tune-up, and/or inspection activity performed on the emission unit described in Tables 1-2 of TA&O No. 8366A in accordance with Paragraph B.11 of TA&O No. 8366A has been performed in accordance with the manufacturer's specifications or current good engineering practice,
 - (B) The date and a description of any maintenance, tune-up, and/or inspection activity performed on the emission unit described in Tables 1-2 in accordance with Paragraph B.11 of TA&O No. 8366A,
 - (C) The name, title and affiliation of the person conducting any maintenance, tune-up, and/or inspection activity performed on the emission unit described in Tables 1-2 in accordance with Paragraph B.11 of TA&O No. 8366A,
 - (D) The operating parameters of the emission unit used to determine that the emission unit is operating in accordance with manufacturer's specification or current good engineering practice prior to and after any adjustments are made during maintenance, tune-up, or inspection activity performed in accordance with Paragraph B.11 of TA&O No. 8366A.
 - ii. By the close of each calendar day, the Permittee shall record the actual fuel type and the actual quantity of each type of fuel in units of volume per day or MMBtu per day for each fuel used the preceding day in an emission unit described in TA&O No. 8366A;
[TA&O No. 8366A, para. B.13.a]
 - iii. On or before the first day of each calendar month, the Permittee shall record the number of DERCs and corresponding serial numbers and vintages for all DERCs in its possession on the first calendar day of that calendar month;
[TA&O No. 8366A, para. B.13.b]
 - iv. On or before the first day of each calendar month, the Permittee shall record the number of DERCs and corresponding serial numbers, vintages, purchase/sales dates, and seller/buyer for all DERCs purchased or sold during the preceding calendar month;
[TA&O No. 8366A, para. B.13.c]
 - v. On or before the first day of each calendar month, the Permittee shall record the Estimated DERCs Required for that calendar month determined in accordance with Paragraph B.7 of TA&O No. 8366A;

Section III: Applicable Requirements and Compliance Demonstration

[TA&O No. 8366A, para. B.13.d]

- vi. On or before the twentieth calendar day of each calendar month, the Permittee shall record the Actual DERCs Required for the preceding calendar month determined in accordance with Paragraph B.7 of TA&O No. 8366A;

[TA&O No. 8366A, para. B.13.e]

- vii. On or before January 31 of each calendar year, the Permittee shall record the quantity of DERCs possessed on the first day of the Ozone Season and the quantity of DERCs deducted in accordance with Paragraphs B.7 and B.8 of TA&O No. 8366A. Such records shall include the serial number and vintage of each DERC deducted from the Permittees' current balance pursuant to Paragraphs B.7 and B.8 of TA&O No. 8366A;

[TA&O No. 8366A, para. B.13.f]

- viii. Not more than 90 days after the completion of each Non-Ozone Season, the Permittee shall record the Non-Ozone Season average NOx emission rate for the emission units described in Tables 1 and 2 of TA&O No. 8366A, the quantity of DERCs possessed on the first day of the Non-Ozone Season, and the quantity of DERCs deducted in accordance with Paragraph B.9 of TA&O No. 8366A;

[TA&O No. 8366A, para. B.13.g]

- ix. For each month of the Ozone Season, the Permittee shall maintain records attesting to the fact that any DERCs deducted from its balance in accordance with Paragraphs B.7 and B.8 of TA&O No. 8366A satisfy the requirements of Paragraph B.2 of TA&O No. 8366A. Generator certification of this fact shall be sufficient; and

[TA&O No. 8366A, para. B.13.h]

- x. On each day during the Ozone Season that the Permittee operate in accordance with Paragraph B.6 of TA&O No. 8366A, the Permittee shall make and keep records of all emission unit operation in accordance with Paragraph B.6 of TA&O No. 8366A, including copies of any written correspondence from the Permittees' fuel supplier detailing the duration and circumstances of the inadequate fuel oil supply or interruption of gaseous fuel supply to the emission units.

[TA&O No. 8366A, para. B.13.i]

d. Reporting Requirements [TA&O No. 8366A, para. B.15]

- i. No later than March 1 of every year after issuance of TA&O No. 8366A, the Permittee shall submit to the commissioner a written report containing copies of all of the records required pursuant to Paragraphs B.13.a – B.13.f, B.13.h and B.13.i of TA&O No. 8366A.
- ii. Not later than July 30 of each calendar year, the Permittee shall submit a written report containing copies of all records required pursuant to Paragraph B.13.g of TA&O No. 8366A.
- iii. The commissioner may prescribe the forms to be used for the submission of these reports. The Permittee shall submit these reports on such forms, if prescribed by the commissioner.

Section III: Applicable Requirements and Compliance Demonstration

D. GROUPED EMISSIONS UNIT 5 (GEU-5): Four GE LM6000PC 50 MW Gas Turbines, NSR Permit Nos. 105-0098, 105-0099, 105-0100, and 105-00101; 40 CFR Part 60 Subpart KKKK; RCSA §§22a-174-19a, 22c, 22e

1. Allowable Fuel Usage

a. *Limitation or Restriction* [P105-0098, 105-0099, 105-0100, 105-0101]

All fuel firing rate limits are per turbine and all annual fuel usage limits are combined limits for GEU-5.

i. Distillate Oil (ULSD)

(A) Less than or equal to 3,475 gallons/hour

(B) Less than or equal to 8,363,000 gallons over any Consecutive Twelve Month Period

(C) Maximum fuel sulfur content (% by weight, dry basis): 0.0015

(D) Maximum Heat Input: 465.7 MMBtu/hr

ii. Natural Gas

(A) Less than or equal to 486,000 scf/hr

(B) Less than or equal to $2,312 \times 10^6$ scf over any Consecutive Twelve Month Period

(C) Maximum Heat Input: 498.2 MMBtu/hr

iii. The Permittee shall use the following equation to determine the maximum amount of fuel available to be burned in GEU-5:

(A) Maximum Natural Gas Use = $Fuel_{ng} - (276.45) \times Fuel_{oil}$

Where :

$Fuel_{ng}$ = 2, 312 million scf natural gas

$Fuel_{oil}$ = gallons of ULSD fuel burned (not to exceed 8,363,000 gal/yr)

b. *Monitoring Requirements* [P105-0098, 105-0099, 105-0100, and 105-0101]

The Permittee shall use individual non-resettable totalizing fuel metering devices or billing meters to continuously monitor fuel feed to GEU-5.

c. *Record Keeping Requirements* [P105-0098, 105-0099, 105-0100, and 105-0101]

i. For each unit the Permittee shall keep records of monthly and consecutive 12 month fuel consumption. The consecutive 12 month fuel consumption shall be determined by adding the current month's fuel usage (for each fuel) to that of the previous 11 months. The calculations shall show continual compliance with the annual fuel limitations above. The Permittee shall make these calculations within 30 days of the end of the previous month.

ii. The Permittee shall keep records of the fuel certification for each delivery of fuel oil from a bulk petroleum provider or a copy of the current contract with the fuel supplier supplying the fuel used by the equipment that includes the applicable sulfur content of the fuel as a condition of each shipment. The shipping receipt or contract shall include the date of delivery, the name of the fuel supplier, type of fuel delivered, the percentage of sulfur in such fuel, by weight, dry basis, and the method used to determine the sulfur content of such fuel.

Section III: Applicable Requirements and Compliance Demonstration

d. Reporting Requirements

The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is earlier.

[RCSA §22a-174-33(j)(1)(X)]

2. Pollutant Emissions

a. Limitation or Restriction [P105-0098, 105-0099, 105-0100, 105-0101]

i. The Permittee shall not exceed the following emissions for each unit at steady state ISO conditions (50% - 100% load):

(A) PM₁₀:

- (1) 12.0 lb/hr (ULSD)
- (2) 6.0 lb/hr (Natural Gas)

(B) PM_{2.5}

- (1) 12.0 lb/hr (ULSD)
- (2) 6.0 lb/hr (Natural Gas)

(C) SO₂

- (1) 0.70 lb/hr (ULSD)
- (2) 0.26 lb/hr (Natural Gas)
- (3) 0.060 lb/MMBtu, both fuels [40 CFR §63.4330(a)(2)]
- (4) The Permittee shall: [RCSA §22a-174-19a]
 - (a) Combust liquid fuel, gaseous fuel or a combination of each provided that each fuel possess a fuel sulfur limit of equal to or less than 0.3 % sulfur, by weight (dry basis);
 - (b) Meet an average emission rate of equal to or less than 0.33 pounds SO₂ per MMBtu for each calendar quarter for an affected unit at a premises; or
 - (c) Meet an average emission rate of equal to or less than 0.3 pounds SO₂ per MMBtu calculated for each calendar quarter, if such owner or operator averages the emissions from two or more affected units at a premises.

(D) NO_x

- (1) ULSD
 - (A) 10.5 lb/hr
 - (B) 5.9 ppmvd @ 15% O₂
 - (C) 74 ppm @ 15% O₂ [40 CFR §63.4325, Table 1]
- (2) Natural Gas
 - (A) 4.4 lb/hr
 - (B) 2.5 ppmvd @ 15% O₂
 - (C) 25 ppm @ 15% O₂ [40 CFR §63.4325, Table 1]

Section III: Applicable Requirements and Compliance Demonstration

(E) VOC

- (1) 0.75 lb/hr (ULSD)
- (2) 1.11 lb/hr (Natural Gas)

(F) CO

- (1) 1.1 lb/hr (ULSD)
- (2) 1.0 ppmvd @ 15% O₂ (ULSD)
- (3) 5.3 lb/hr (Natural Gas)
- (4) 5.0 ppmvd @ 15% O₂ (Natural Gas)

(G) Pb

Less than or equal to 6.4E-3 lb/hr (ULSD)

ii. Maximum Allowable Annual Emissions (tons/year)

(A) Emission limits are combined worst case for GEU-5 using either natural gas or distillate fuel or a combination thereof:

- (1) PM₁₀: 14.9
- (2) PM_{2.5}: 14.9
- (3) SO₂: 0.9
- (4) NO_x: 10.8
- (5) VOC: 2.8
- (6) CO: 19.9
- (7) Pb: 7.9E-3

b. *Monitoring Requirements*

i. The Permittee shall conduct CO emissions tests at least once every five years from the date of the previous stack test.

[P105-0098, 105-0099, 105-0100, and 105-0101]

ii. NO_x

(A) The Permittee shall conduct NO_x emission tests of the unit at least once every five years from the date of the previous stack test.

[P105-0098, 105-0099, 105-0100, and 105-0101; RCSA §22a-174-22e(l)]

- (1) The Permittee shall comply with the NO_x monitoring requirements in 40 CFR §§60.4335 through 60.4355.
- (2) The Permittee shall conduct NO_x stack testing, if required, pursuant to 40 CFR Part 75, Appendix E.

iii. SO₂

(A) The Permittee shall monitor the SO₂ emissions in accordance with 40 CFR Part 75 Acid Rain CEM guidelines. [RCSA §22a-174-33(j)(1)(K)(ii)]

(B) The Permittee shall comply with the SO₂ monitoring requirements of 40 CFR §§60.4360 through 60.4370.

Section III: Applicable Requirements and Compliance Demonstration

iv. VOC and Pb

(A) Record Keeping specified in Section III.D.2.c of this Title V permit shall be sufficient to meet other Monitoring Requirements pursuant to RCSA §22a-174-33.

[RCSA §22a-174-33(j)(1)(K)(ii)]

c. *Record Keeping Requirements* [P105-0098, 105-0099, 105-0100, and 105-0101]

i. Demonstration of compliance with the emission limits in Section III.C.2.a of this Title V permit shall be met by using the following sources:

[P105-0098, 105-0099, 105-0100, and 105-0101]

(A) PM₁₀/PM_{2.5}, NO_x, CO: Most recent stack test data

(B) SO_x: Calculated from 0.0015% S or less in ULSD

(C) VOC and Pb: AP-42 Chapter 3, Fifth Edition, Volume 1, Table 3.1-2a, dated 04/00

ii. The Permittee shall calculate and record the monthly and consecutive 12 month PM₁₀, PM_{2.5}, SO₂, NO_x, VOC, CO, and Pb emissions in units of tons. The consecutive 12 month emissions shall be determined by adding (for each pollutant) the current month's emissions to that of the previous 11 months. Such records shall include a sample calculation for each pollutant. The Permittee shall make these calculations within 30 days of the end of the previous month.

iii. NO_x

(A) The Permittee shall maintain records of all CEM data, stack test results and calculations demonstrating compliance with the limitation or restriction in Section III.D.2.a.i of this Title V permit.

[RCSA §22a-174-33(j)(1)(K)]

(B) The Permittee shall maintain records of each tune-up, repairs, replacement of parts and other maintenance, such records shall include the following: [RCSA §22a-174-22e(j)(2)(E)]

(1) The date on which the emissions unit is tuned-up;

(2) The name, title and affiliation of the person performing the tune-up; and

(3) A description of work performed, including the procedures used to inspect and perform adjustments.

(C) The Permittee shall maintain records of all documents, other records or reports required by an order or permit by the commissioner.

[RCSA §§22a-174-22e(j)(F) & (G)]

(D) The Permittee shall maintain records of the dates, times, and places of all emission testing required by RCSA §22a-174-22e(j)(2)(C), the persons performing the measurements, the testing methods used, the operating conditions at the time of testing, and the results of such testing.

iv. SO₂

The Permittee shall make and keep the applicable records pursuant to RCSA §22a-174-19a(i). [P105-0098, 105-0099, 105-0100, and 105-0101]

v. The Permittee shall maintain records of stack test results and make calculations

Section III: Applicable Requirements and Compliance Demonstration

demonstrating continual compliance with the above emission factor and limits.

[RCSA §22a-174-33(j)(1)(K)]

d. Reporting Requirements

- i. The Permittee shall submit the required reports pursuant to 40 CFR §60.4375.
- ii. The Permittee shall comply with the excess emissions and monitoring downtime requirements for NO_x emissions pursuant to 40 CFR §60.4380.
- iii. The Permittee shall submit reports of SO₂ emissions in accordance with the Acid Rain permit in Section III.E of this Title V permit and RCSA §22a-174-19a(j).
- iv. The Permittee shall submit the required reports pursuant to RCSA §22a-174-22e(k).
- v. The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is earlier.

[RCSA §22a-174-33(j)(1)(X)]

3. CAIR NO_x Ozone Season Trading Program

Grouped Emissions Unit 5 (GEU-5) is comprised of CAIR NO_x Ozone season units and therefore are subject to RCSA §22a-174-22c. The units shall comply with all applicable requirements stated in RCSA §22a-174-22c and the standard requirements of the CAIR permit application.

4. NO_x and CO Startup/Shutdown Emissions

a. Limitation or Restriction [P105-0098, 105-0099, 105-0100, 105-0101]

- i. The Permittee shall minimize emissions during periods of startup and shutdown by the following work practices and time constraints:
 - (A) Start the ammonia injection as soon as the minimum catalyst temperature is reached;
 - (B) The oxidation catalyst will not be bypassed during startup or shutdown;
 - (C) The duration of startup and malfunction shall not exceed 60 minutes; and
 - (D) The duration of the shutdown shall not exceed 30 minutes.
- ii. ULSD
 - (A) NO_x
 - (1) 40 lb/event during startup
 - (2) 25 lb/event during shutdown
 - (B) CO
 - (1) 18 lb/event during startup
 - (2) 9 lb/event during shutdown
- iii. Natural Gas
 - (A) NO_x
 - (1) 20 lb/event during startup
 - (2) 13 lb/event during shutdown

Section III: Applicable Requirements and Compliance Demonstration

(B) CO

- (1) 32 lb/event during startup
- (2) 27 lb/event during shutdown

b. *Monitoring Requirements*

Record Keeping specified in Section III.D.4.c of this Title V permit shall be sufficient to meet other Monitoring Requirements pursuant to RCSA §22a-174-33.

[RCSA §22a-174-33(j)(1)(K)(ii)]

c. *Record Keeping Requirements* [P105-0098, 105-0099, 105-0100, and 105-0101]

- i. The Permittee shall keep records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the combustion turbines; any malfunction of the air pollution control equipment; or any periods during which a monitoring device is inoperative.

Such records shall contain the following information:

- (A) Type of event (startup, shutdown, or malfunction);
 - (B) Equipment affected;
 - (C) Date of event;
 - (D) Duration of event (minutes);
 - (E) Fuel being used during event; and
 - (F) Total NO_x and CO emissions emitted (lb) during the event.
- ii. The Permittee shall demonstrate compliance with the emission limits in Section III.D.2 and D.4 of this Title V permit by calculating the emission rates using emission factors from the following sources:
 - (A) PM_{10/2.5}, NO_x, CO, Ammonia: Most recent stack test data
 - (B) NO_x, CO startup/shutdown emission rates: Manufacturer's Data
 - (C) SO_x: Calculated from 0.0015% S or less in distillate fuel oil
 - (D) VOC and Pb: AP-42 Chapter 3, Fifth Edition, Volume 1, Table 3.1-2a, dated 04/00

d. *Reporting Requirements*

The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is earlier. [RCSA §22a-174-33(j)(1)(X)]

5. Ammonia Emissions

a. *Limitations or Restrictions* [P105-0098, 105-0099, 105-0100, and 105-0101]

Ammonia emissions from each unit shall be less than or equal to 5.0 ppmvd @ 15% O₂ at steady state (50% - 100% load).

b. *Monitoring and Testing Requirements*

[P105-0098, 105-0099, 105-0100, and 105-0101]

The Permittee shall demonstrate compliance through stack testing once every five years

Section III: Applicable Requirements and Compliance Demonstration

starting from the date of the initial stack test to demonstrate compliance with the permit limit listed above.

c. Record Keeping Requirements

- i. Demonstration of compliance with the emission limit in Section III.D.5.a shall be met by using most recent stack test data.

[P105-0098, 105-0099, 105-0100, and 105-0101]

- ii. The Permittee shall keep records of each delivery of aqueous ammonia. The records shall include:

[P105-0098, 105-0099, 105-0100, and 105-0101]

- (A) The date of delivery;
(B) The name of the supplier;
(C) The quantity of aqueous ammonia delivered; and
(D) The percentage of ammonia in solution, by weight.

- iii. The Permittee shall maintain records of stack test results and make calculations demonstrating continual compliance with the above emission factor and limits.

[RCSA §22a-174-33(j)(1)(K)(ii)]

d. Reporting Requirements

The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is earlier. [RCSA §22a-174-33(j)(1)(X)]

6. Opacity

a. Limitations or Restrictions [P105-0098, 105-0099, 105-0100, and 105-0101]

GEU-5 shall not exceed 10% opacity during any six minute block average as measured by 40 CFR Part 60, Appendix A, Reference Method 9

b. Monitoring and Testing Requirements

Record keeping specified in Section III.D.6.c of this Title V permit shall be sufficient to meet other Monitoring Requirements pursuant to RCSA §22a-174-33.

[RCSA §22a-174-33(j)(1)(K)(ii)]

c. Record Keeping Requirements

The Permittee shall maintain records sufficient to determine compliance with the limitation or restriction in Section III.D.6.a of this Title V permit.

[RCSA §22a-174-33(j)(1)(K)]

d. Reporting Requirements

The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is earlier.

[RCSA §22a-174-33(j)(1)(X)]

Section III: Applicable Requirements and Compliance Demonstration

7. Pollution Control Equipment (SCR/Oxidation Catalyst/Water Injection)

a. Limitation or Restriction

- i. The Permittee shall immediately institute shutdown of GEU-5 in the event a malfunction cannot be corrected within three hours.

[P105-0098, 105-0099, 105-0100, and 105-0101]

- ii. The Permittee shall operate and maintain the air pollution control equipment in accordance with the manufacturer's specifications and written recommendations. The Permittee shall operate and maintain these stationary combustion turbines, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emission at all times including during startup, shutdown, and malfunction.

[40 CFR §60.4333(a)]

- iii. The Permittee shall maintain the water-to-fuel ratio when the turbines are in operation between 0.680 – 1.102 lb/lb, as determined by the initial performance test to show compliance with the NO_x emission rates in this Title V permit.

[P105-0098, 105-0099, 105-0100, and 105-0101]

b. Monitoring Requirements [P105-0098, 105-0099, 105-0100, and 105-0101]

- i. The Permittee shall continuously monitor the water-to-fuel ratio.

(A) The Permittee shall install, calibrate, maintain and operate a continuous monitoring system to monitor the fuel consumption and the ratio of water or steam to fuel being fired when burning a fuel that requires water or steam injection for compliance.

[40 CFR §63.4335(a)]

(B) The Permittee shall comply with the applicable monitoring requirements found in 40 CFR §63.4355.

- ii. The Permittee shall continuously monitor the SCR ammonia injection rate (lb/hr), operating temperature (°F) and the pressure drop (inches of water) across the SCR catalyst bed.

- iii. The Permittee shall continuously monitor the oxidation catalyst inlet temperature (°F).

- iv. The Permittee shall perform inspections on the SCR and oxidation catalysts as recommended by the manufacturer.

c. Record Keeping Requirements [P105-0098, 105-0099, 105-0100, and 105-0101]

The Permittee shall make and keep the following records for the pollution control equipment:

- i. The Permittee shall keep records of the inspection and maintenance of the SCR and oxidation catalyst. The records shall include:

(A) The name of the person,

(B) The date,

(C) The results or actions, and

(D) The date the catalyst is replaced.

- ii. The Permittee shall continuously record the SCR ammonia injection rate (lb/hr), operating

Section III: Applicable Requirements and Compliance Demonstration

- temperature (°F) and the pressure drop (inches of water) across the SCR catalyst bed.
- iii. The Permittee shall continuously record the oxidation catalyst inlet temperature (°F).
 - iv. The Permittee shall keep records of manufacturer's specifications and written recommendations.
 - v. The Permittee shall record the fuel consumption and the ratio of water or steam to fuel being fired when burning a fuel that requires water or steam injection for compliance.
[40 CFR §63.4335(a)]
 - vi. The Permittee shall keep records of all exceedances of any operating parameter. Such records shall include:
 - (A) The date and time of the exceedance,
 - (B) A detailed description of the exceedance, and
 - (C) The duration of the exceedance.
- d. *Reporting Requirements* [P105-0098, 105-0099, 105-0100, and 105-0101]
- i. The Permittee shall notify the commissioner in writing of any exceedance of an operating parameter, and shall identify the cause or likely cause of such exceedance, all corrective actions and preventative measures taken with respect thereto, and the dates of such actions and measures as follows:
 - (A) For any hazardous air pollutant, no later than 24 hours after such exceedance commenced; and
 - (B) For any other operating parameter, no later than ten days after such exceedance commenced.
 - ii. The Permittee shall notify the commissioner in writing of any malfunction of the stationary gas turbines, the air pollution control equipment or the continuous monitoring system. The Permittee shall submit such notification with seven days of the malfunction. The notification shall include the following:
 - (A) Description of the malfunction and a description of the circumstances surrounding the cause or likely cause of such malfunction and,
 - (B) Description of all corrective actions and preventative measures taken and/or planned with respect to such malfunction and the dates of such actions and measures.

8. Turbine Exchanges

a. *Record Keeping Requirements* [P105-0098, 105-0099, 105-0100, and 105-0101]

The Permittee shall make and keep records of when the turbines are exchanged for routine maintenance, to include the following:

- i. The date the turbine was changed
- ii. The reason for the change;
- iii. Documentation that the replacement turbine or gas generator is the same make and model number; and
- iv. Documentation that the replacement turbine does not result in an increase in emissions, the emission of any new air pollutants, or increases in electrical output of the turbine.

b. *Reporting Requirements*

Section III: Applicable Requirements and Compliance Demonstration

The Permittee shall submit additional information in writing, at the commissioner’s request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is earlier.

[RCSA §22a-174-33(j)(1)(X)]

9. 40 CFR Part 60 Subpart KKKK

The Permittee shall comply with the New Source Performance Standard for Stationary Gas Turbines as specified in 40 CFR Part 60 Subpart KKKK.

E. FEDERAL ACID RAIN PERMIT REQUIREMENTS: GEU-4 and GEU-5

1. SO₂ Allowance Allocations and NO_x Requirements for Each Affected Unit

a. General Electric 40 MW Combustion Turbine Model LM6000PA

		2018	2019	2020	2021	2022
EU-08 (Unit 11)	SO ₂ Allowances under Tables 2, 3, or 4 of 40 CFR Part 73	0	0	0	0	0
	NO _x Limit	Not an Affected Unit under 40 CFR Part 76				

b. General Electric 40 MW Combustion Turbine Model LM6000PA

		2018	2019	2020	2021	2022
EU-09 (Unit 12)	SO ₂ Allowances under Tables 2, 3, or 4 of 40 CFR Part 73	0	0	0	0	0
	NO _x Limit	Not an Affected Unit under 40 CFR Part 76				

c. General Electric 40 MW Combustion Turbine Model LM6000PA

		2018	2019	2020	2021	2022
EU-10 (Unit 13)	SO ₂ Allowances under Tables 2, 3, or 4 of 40 CFR Part 73	0	0	0	0	0
	NO _x Limit	Not an Affected Unit under 40 CFR Part 76				

Section III: Applicable Requirements and Compliance Demonstration

d. General Electric 40 MW Combustion Turbine Model LM6000PA

		2018	2019	2020	2021	2022
EU-11 (Unit 14)	SO ₂ Allowances under Tables 2, 3, or 4 of 40 CFR Part 73	0	0	0	0	0
	NO _x Limit	Not an Affected Unit under 40 CFR Part 76				

e. General Electric 50 MW Combustion Turbine Model LM6000PC

		2018	2019	2020	2021	2022
EU-12 (Unit 15)	SO ₂ Allowances under Tables 2, 3, or 4 of 40 CFR Part 73	0	0	0	0	0
	NO _x Limit	Not an Affected Unit under 40 CFR Part 76				

f. General Electric 50 MW Combustion Turbine Model LM6000PC

		2018	2019	2020	2021	2022
EU-13 (Unit 16)	SO ₂ Allowances under Tables 2, 3, or 4 of 40 CFR Part 73	0	0	0	0	0
	NO _x Limit	Not an Affected Unit under 40 CFR Part 76				

g. General Electric 50 MW Combustion Turbine Model LM6000PC

		2018	2019	2020	2021	2022
EU-14 (Unit 17)	SO ₂ Allowances under Tables 2, 3, or 4 of 40 CFR Part 73	0	0	0	0	0
	NO _x Limit	Not an Affected Unit under 40 CFR Part 76				

Section III: Applicable Requirements and Compliance Demonstration

h. General Electric 50 MW Combustion Turbine Model LM6000PC

		2018	2019	2020	2021	2022
EU-15 (Unit 18)	SO ₂ Allowances under Tables 2, 3, or 4 of 40 CFR Part 73	0	0	0	0	0
	NO _x Limit	Not an Affected Unit under 40 CFR Part 76				

2. Phase II Acid Rain Permit Application

The attached Phase II Acid Rain Permit Application is hereby incorporated by reference into this Title V permit. If this Title V permit is in conflict with or inconsistent with the Phase II Acid Rain Permit Application, the Title V permit requirements, including any applicable requirement under 40 CFR Parts 72 through 78, inclusive, shall supersede the Phase II Acid Rain Permit Application and the Permittee shall be governed by and adhere to this Title V permit and any applicable requirement under 40 CFR Parts 72 through 78, inclusive.

Section III: Applicable Requirements and Compliance Demonstration

F. PREMISES-WIDE GENERAL REQUIREMENTS

1. **Annual Emission Statements:** The Permittee shall submit annual emission statements requested by the commissioner as set forth in RCSA §22a-174-4(d)(1).
2. **Emergency Episode Procedures:** The Permittee shall comply with the procedures for emergency episodes as set forth in RCSA §22a-174-6.
3. **Reporting of Malfunctioning Control Equipment:** The Permittee shall comply with the reporting requirements of malfunctioning control equipment as set forth in RCSA §22a-174-7.
4. **Prohibition of Air Pollution:** The Permittee shall comply with the requirement to prevent air pollution as set forth in RCSA §22a-174-9.
5. **Public Availability of Information:** The public availability of information shall apply, as set forth in RCSA §22a-174-10.
6. **Prohibition Against Concealment/Circumvention:** The Permittee shall comply with the prohibition against concealment or circumvention as set forth in RCSA §22a-174-11.
7. **Violations and Enforcement:** The Permittee shall not violate or cause the violation of any applicable regulation as set forth in RCSA §22a-174-12.
8. **Variances:** The Permittee may apply to the commissioner for a variance from one or more of the provisions of these regulations as set forth in RCSA §22a-174-13.
9. **No Defense to Nuisance Claim:** The Permittee shall comply with the regulations as set forth in RCSA §22a-174-14.
10. **Severability:** The Permittee shall comply with the severability requirements as set forth in RCSA §22a-174-15.
11. **Responsibility to Comply:** The Permittee shall be responsible to comply with the applicable regulations as set forth in RCSA §22a-174-16.
12. **Particulate Emissions:** The Permittee shall comply with the standards for control of particulate matter and visible emissions as set forth in RCSA §22a-174-18.
13. **Fuel Sulfur Content:** The Permittee shall not use No. 2 heating oil that exceeds fifteen parts per million of sulfur by weight as set forth in CGS §16a-21a(a)(2)(B).
14. **Sulfur Dioxide Emissions:** The Permittee shall comply with the requirements for Control of Sulfur Dioxide Emissions from Power Plants and other large stationary sources of air pollution as set forth in RCSA §22a-174-19a.
15. **Sulfur Compound Emissions:** The Permittee shall comply with the requirements for control of sulfur compound emissions as set forth in RCSA §§22a-174-19, 22a-174-19a and 22a-174-19b, as applicable.
16. **Organic Compound Emissions:** The Permittee shall comply with the requirements for control of organic compound emissions as set forth in RCSA §22a-174-20.

Section III: Applicable Requirements and Compliance Demonstration

- 17. Nitrogen Oxide Emissions:** The Permittee shall comply with the requirements for control of nitrogen oxide emissions as set forth in RCSA §22a-174-22e and §22a-174-22f.
- 18. Ambient Air Quality:** The Permittee shall not cause or contribute to a violation of an ambient air quality standard as set forth in RCSA §22a-174-24(b).
- 19. Open Burning:** The Permittee is prohibited from conducting open burning, except as may be allowed by CGS §22a-174(f).
- 20. Asbestos:** Should the premises, as defined in 40 CFR §61.145, become subject to the national emission standard for asbestos regulations in 40 CFR Part 61 Subpart M when conducting any renovation or demolition at this premises, then the Permittee shall submit proper notification as described in 40 CFR §61.145(b) and shall comply with all other applicable requirements of 40 CFR Part 61 Subpart M.
- 21. Emission Fees:** The Permittee shall pay an emission fee as set forth in RCSA §22a-174-26(d).

Section IV: Compliance Schedule

TABLE IV: COMPLIANCE SCHEDULE				
Emissions Unit	Applicable Regulations	Steps Required for Achieving Compliance (Milestones)	Date by which Each Step is to be Completed	Dates for Monitoring, Record Keeping, and Reporting
		No Steps are required for achieving compliance at this time		

Section V: State Enforceable Terms and Conditions

Only the Commissioner of the Department of Energy and Environmental Protection has the authority to enforce the terms, conditions and limitations contained in this section.

SECTION V: STATE ENFORCEABLE TERMS AND CONDITIONS

- A.** This Title V permit does not relieve the Permittee of the responsibility to conduct, maintain and operate the emissions units in compliance with all applicable requirements of any other Bureau of the Department of Energy and Environmental Protection or any federal, local or other state agency. Nothing in this Title V permit shall relieve the Permittee of other obligations under applicable federal, state and local law.
- B.** Nothing in this Title V permit shall affect the commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, investigate air pollution, recover costs and natural resource damages, and to impose penalties for violations of law, including but not limited to violations of this or any other permit issued to the Permittee by the commissioner.
- C.** Additional Emissions Units
- 1.** The Permittee shall make and submit a written record, at the commissioner's request, within 30 days of receipt of notice from the commissioner, or by such other date specified by the commissioner, of each additional emissions unit or group of similar or identical emissions units at the premises.
 - 2.** Such record of additional emissions units shall include each emissions unit, or group of emissions units, at the premises which is not listed in Section II.A of this Title V permit, unless the emissions unit, or group of emissions units, is:
 - a. an insignificant emissions unit as defined in RCSA §22a-174-33; or
 - b. an emissions unit or activity listed in *White Paper for Streamlined Development of Part 70 Permit Applications, Attachment A* (EPA guidance memorandum dated July 10, 1995).
 - 3.** For each emissions unit, or group of emissions units, on such record, the record shall include, as available:
 - a. Description, including make and model;
 - b. Year of construction/installation or if a group, range of years of construction/installation;
 - c. Maximum throughput or capacity; and
 - d. Fuel type, if applicable.
- D.** Odors: The Permittee shall not cause or permit the emission of any substance or combination of substances which creates or contributes to an odor that constitutes a nuisance beyond the property boundary of the premises as set forth in RCSA §22a-174-23.
- E.** Noise: The Permittee shall operate in compliance with the regulations for the control of noise as set forth in RCSA §§22a-69-1 through 22a-69-7.4, inclusive.

Section V: State Enforceable Terms and Conditions

- F.** Hazardous Air Pollutants (HAPs): The Permittee shall operate in compliance with the regulations for the control of HAPs as set forth in RCSA §22a-174-29.
- G.** The Permittee shall comply with the requirements for Control of Carbon Dioxide Emissions as set forth in RCSA §22a-174-31.

Section VI: Title V Requirements

The Administrator of the United States Environmental Protection Agency and the Commissioner of the Department of Energy and Environmental Protection have the authority to enforce the terms and conditions contained in this section.

SECTION VI: TITLE V REQUIREMENTS

A. SUBMITTALS TO THE COMMISSIONER & ADMINISTRATOR

The date of submission to the commissioner of any document required by this Title V permit shall be the date such document is received by the commissioner. The date of any notice by the commissioner under this Title V permit, including, but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is delivered or the date three days after it is mailed by the commissioner, whichever is earlier. Except as otherwise specified in this Title V permit, the word "day" means calendar day. Any document or action which is required by this Title V permit to be submitted or performed by a date which falls on a Saturday, Sunday or legal holiday shall be submitted or performed by the next business day thereafter.

Any document required to be submitted to the commissioner under this Title V permit shall, unless otherwise specified in writing by the commissioner, be directed to: Office of the Director; Engineering & Enforcement Division; Bureau of Air Management; Department of Energy and Environmental Protection; 79 Elm Street, 5th Floor; Hartford, Connecticut 06106-5127.

Any submittal to the Administrator of the Environmental Protection Agency shall be in a computer-readable format and addressed to: U.S. EPA New England, 5 Post Office Square, Suite 100 (OES04-2), Boston, Massachusetts 02109, Attn: Air Clerk.

B. CERTIFICATIONS [RCSA §22a-174-33(b)]

In accordance with RCSA §22a-174-33(b), any report or other document required by this Title V permit and any other information submitted to the commissioner or Administrator shall be signed by an individual described in RCSA §22a-174-2a(a), or by a duly authorized representative of such individual. Any individual signing any document pursuant to RCSA §22a-174-33(b) shall examine and be familiar with the information submitted in the document and all attachments thereto, and shall make inquiry of those individuals responsible for obtaining the information to determine that the information is true, accurate, and complete, and shall also sign the following certification as provided in RCSA §22a-174-2a(a)(4):

“I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes, under Section 53a-157b of the Connecticut General Statutes, and in accordance with any applicable statute.”

C. SIGNATORY RESPONSIBILITY [RCSA §22a-174-2a(a)]

For purposes of signing any Title V-related application, document, report or certification required by RCSA §22a-174-33, any corporation's duly authorized representative may be either a named individual or any individual occupying a named position. Such named individual or individual occupying a named position is a duly authorized representative if such individual is responsible for the overall operation of one or more manufacturing, production or operating facilities subject to RCSA §22a-174-33 and either:

Section VI: Title V Requirements

1. The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding 25 million dollars in second quarter 1980 dollars; or
2. The delegation of authority to the duly authorized representative has been given in writing by an officer of the corporation in accordance with corporate procedures and the following:
 - i. Such written authorization specifically authorizes a named individual, or a named position, having responsibility for the overall operation of the Title V premises or activity,
 - ii. Such written authorization is submitted to the commissioner and has been approved by the commissioner in advance of such delegation. Such approval does not constitute approval of corporate procedures, and
 - iii. If a duly authorized representative is a named individual in an authorization submitted under subclause ii. of this subparagraph and a different individual is assigned or has assumed the responsibilities of the duly authorized representative, or, if a duly authorized representative is a named position in an authorization submitted under subclause ii. of this subparagraph and a different named position is assigned or has assumed the duties of the duly authorized representative, a new written authorization shall be submitted to the commissioner prior to or together with the submission of any application, document, report or certification signed by such representative.

D. ADDITIONAL INFORMATION [RCSA §22a-174-33(j)(1)(X), RCSA §22a-174-33(h)(2)]

The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is earlier, including information to determine whether cause exists for modifying, revoking, reopening, reissuing, or suspending this Title V permit or to determine compliance with this Title V permit.

In addition, the Permittee shall submit information to address any requirements that become applicable to the subject source and shall submit correct, complete, and sufficient information within 15 days of the applicant's becoming aware of any incorrect, incomplete, or insufficient submittal, during the pendency of the application, or any time thereafter, with an explanation for such deficiency and a certification pursuant to RCSA §22a-174-2a(a)(5).

E. MONITORING REPORTS [RCSA §22a-174-33(o)(1)]

A Permittee, required to perform monitoring pursuant to this Title V permit, shall submit to the commissioner, on forms prescribed by the commissioner, written monitoring reports on March 1 and September 1 of each year or on a more frequent schedule if specified in such permit. Such monitoring reports shall include the date and description of each deviation from a permit requirement including, but not limited to:

1. Each deviation caused by upset or control equipment deficiencies; and
2. Each deviation of a permit requirement that has been monitored by the monitoring systems required under this Title V permit, which has occurred since the date of the last monitoring report; and
3. Each deviation caused by a failure of the monitoring system to provide reliable data.

Section VI: Title V Requirements

F. PREMISES RECORDS [RCSA §22a-174-33(o)(2)]

Unless otherwise required by this Title V permit, the Permittee shall make and keep records of all required monitoring data and supporting information for at least five years from the date such data and information were obtained. The Permittee shall make such records available for inspection at the site of the subject source, and shall submit such records to the commissioner upon request. The following information, in addition to required monitoring data, shall be recorded for each permitted source:

1. The type of monitoring or records used to obtain such data, including record keeping;
2. The date, place, and time of sampling or measurement;
3. The name of the individual who performed the sampling or the measurement and the name of such individual's employer;
4. The date(s) on which analyses of such samples or measurements were performed;
5. The name and address of the entity that performed the analyses;
6. The analytical techniques or methods used for such analyses;
7. The results of such analyses;
8. The operating conditions at the subject source at the time of such sampling or measurement; and
9. All calibration and maintenance records relating to the instrumentation used in such sampling or measurements, all original strip-chart recordings or computer printouts generated by continuous monitoring instrumentation, and copies of all reports required by the subject permit.

G. PROGRESS REPORTS [RCSA §22a-174-33(q)(1)]

The Permittee shall, on March 1 and September 1 of each year, or on a more frequent schedule if specified in this Title V permit, submit to the commissioner a progress report on forms prescribed by the commissioner, and certified in accordance with RCSA §22a-174-2a(a)(5). Such report shall describe the Permittee's progress in achieving compliance under the compliance plan schedule contained in this Title V permit. Such progress report shall:

1. Identify those obligations under the compliance plan schedule in this Title V permit which the Permittee has met, and the dates on which they were met; and
2. Identify those obligations under the compliance plan schedule in this Title V permit which the Permittee has not timely met, explain why they were not timely met, describe all measures taken or to be taken to meet them and identify the date by which the Permittee expects to meet them.

Any progress report prepared and submitted pursuant to RCSA §22a-174-33(q)(1) shall be simultaneously submitted by the Permittee to the Administrator.

Section VI: Title V Requirements

H. COMPLIANCE CERTIFICATIONS [RCSA §22a-174-33(q)(2)]

The Permittee shall, on March 1 of each year, or on a more frequent schedule if specified in this Title V permit, submit to the commissioner a written compliance certification certified in accordance with RCSA §22a-174-2a(a)(5) and which includes the information identified in 40 CFR §§70.6(c)(5)(iii)(A) to (C), inclusive.

Any compliance certification prepared and submitted pursuant to RCSA §22a-174-33(q)(2) shall be simultaneously submitted by the Permittee to the Administrator.

I. PERMIT DEVIATION NOTIFICATIONS [RCSA §22a-174-33(p)]

Notwithstanding Section VI.E. of this Title V permit, the Permittee shall notify the commissioner in writing, on forms prescribed by the commissioner, of any deviation from an emissions limitation, and shall identify the cause or likely cause of such deviation, all corrective actions and preventive measures taken with respect thereto, and the dates of such actions and measures as follows:

1. For any hazardous air pollutant, no later than 24 hours after such deviation commenced; and
2. For any other regulated air pollutant, no later than ten days after such deviation commenced.

J. PERMIT RENEWAL [RCSA §22a-174-33(j)(1)(B)]

All of the terms and conditions of this Title V permit shall remain in effect until the renewal permit is issued or denied provided that a timely renewal application is filed in accordance with RCSA §§22a-174-33(g), -33(h), and -33(i).

K. OPERATE IN COMPLIANCE [RCSA §22a-174-33(j)(1)(C)]

The Permittee shall operate the source in compliance with the terms of all applicable regulations, the terms of this Title V permit, and any other applicable provisions of law. In addition, any noncompliance constitutes a violation of the Clean Air Act and Chapter 446c of the Connecticut General Statutes and is grounds for federal and/or state enforcement action, permit termination, revocation and reissuance, or modification, and denial of a permit renewal application.

L. COMPLIANCE WITH PERMIT [RCSA §22a-174-33(j)(1)(G)]

This Title V permit shall not be deemed to:

1. Preclude the creation or use of emission reduction credits or allowances or the trading thereof in accordance with RCSA §§22a-174-33(j)(1)(I) and -33(j)(1)(P), provided that the commissioner's prior written approval of the creation, use, or trading is obtained;
2. Authorize emissions of an air pollutant so as to exceed levels prohibited pursuant to 40 CFR Part 72;
3. Authorize the use of allowances pursuant to 40 CFR Parts 72 through 78, inclusive, as a defense to noncompliance with any other applicable requirement; or
4. Impose limits on emissions from items or activities specified in RCSA §§22a-174-33(g)(3)(A) and -33(g)(3)(B) unless imposition of such limits is required by an applicable requirement.

Section VI: Title V Requirements

M. INSPECTION TO DETERMINE COMPLIANCE [RCSA §22a-174-33(j)(1)(M)]

The commissioner may, for the purpose of determining compliance with this Title V permit and other applicable requirements, enter the premises at reasonable times to inspect any facilities, equipment, practices, or operations regulated or required under such permit; to sample or otherwise monitor substances or parameters; and to review and copy relevant records lawfully required to be maintained at such premises in accordance with this Title V permit. It shall be grounds for permit revocation should entry, inspection, sampling, or monitoring be denied or effectively denied, or if access to and the copying of relevant records is denied or effectively denied.

N. PERMIT AVAILABILITY

The Permittee shall have available at the facility at all times a copy of this Title V permit.

O. SEVERABILITY CLAUSE [RCSA §22a-174-33(j)(1)(R)]

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

P. NEED TO HALT OR REDUCE ACTIVITY [RCSA §22a-174-33(j)(1)(T)]

It shall not be a defense for the Permittee 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 Title V permit.

Q. PERMIT REQUIREMENTS [RCSA §22a-174-33(j)(1)(V)]

The filing of an application or of a notification of planned changes or anticipated noncompliance does not stay the Permittee's obligation to comply with this Title V permit.

R. PROPERTY RIGHTS [RCSA §22a-174-33(j)(1)(W)]

This Title V permit does not convey any property rights or any exclusive privileges. This Title V permit is subject to, and in no way derogates from any present or future property rights or other rights or powers of the State of Connecticut, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the facility or regulated activity affected thereby, including CGS §4-181a(b) and RCSA §22a-3a-5(b). This Title V permit shall neither create nor affect any rights of persons who are not parties to this Title V permit.

S. ALTERNATIVE OPERATING SCENARIO RECORDS [RCSA §22a-174-33(o)(3)]

The Permittee shall, contemporaneously with making a change authorized by this Title V permit from one alternative operating scenario to another, maintain a record at the premises indicating when changes are made from one operating scenario to another and shall maintain a record of the current alternative operating scenario.

Section VI: Title V Requirements

T. OPERATIONAL FLEXIBILITY AND OFF-PERMIT CHANGES [RCSA §22a-174-33(r)(2)]

The Permittee may engage in any action allowed by the Administrator in accordance with 40 CFR §§70.4(b)(12)(i) to (iii)(B), inclusive, and 40 CFR §§70.4(b)(14)(i) to (iv), inclusive, without a Title V non-minor permit modification, minor permit modification or revision and without requesting a Title V non-minor permit modification, minor permit modification or revision provided such action does not:

1. Constitute a modification under 40 CFR Part 60, 61 or 63;
2. Exceed emissions allowable under the subject permit;
3. Constitute an action which would subject the Permittee to any standard or other requirement pursuant to 40 CFR Parts 72 to 78, inclusive; or
4. Constitute a non-minor permit modification pursuant to RCSA §22a-174-2a(d)(4).

At least seven days before initiating an action specified in RCSA §22a-174-33(r)(2)(A), the Permittee shall notify the Administrator and the commissioner in writing of such intended action.

U. INFORMATION FOR NOTIFICATION [RCSA §22a-174-33(r)(2)(A)]

Written notification required under RCSA §22a-174-33(r)(2)(A) shall include a description of each change to be made, the date on which such change will occur, any change in emissions that may occur as a result of such change, any Title V permit terms and conditions that may be affected by such change, and any applicable requirement that would apply as a result of such change. The Permittee shall thereafter maintain a copy of such notice with the Title V permit. The commissioner and the Permittee shall each attach a copy of such notice to their copy of the Title V permit.

V. TRANSFERS [RCSA §22a-174-2a(g)]

No person other than the Permittee shall act or refrain from acting under the authority of this Title V permit unless such permit has been transferred to another person in accordance with RCSA §22a-174-2a(g).

The proposed transferor and transferee of a permit shall submit to the commissioner a request for a permit transfer on a form provided by the commissioner. A request for a permit transfer shall be accompanied by any fees required by any applicable provision of the general statutes or regulations adopted thereunder. The commissioner may also require the proposed transferee to submit with any such request, the information identified in CGS §22a-6o.

W. REVOCATION [RCSA §22a-174-2a(h)]

The commissioner may revoke this Title V permit on his own initiative or on the request of the Permittee or any other person, in accordance with CGS §4-182(c), RCSA §22a-3a-5(d), and any other applicable law. Any such request shall be in writing and contain facts and reasons supporting the request. The Permittee requesting revocation of this Title V permit shall state the requested date of revocation and provide evidence satisfactory to the commissioner that the subject source is no longer a Title V source.

Pursuant to the Clean Air Act, the Administrator has the power to revoke this Title V permit. Pursuant to the Clean Air Act, the Administrator also has the power to reissue this Title V permit if the Administrator has determined that the commissioner failed to act in a timely manner on a permit renewal application.

Section VI: Title V Requirements

This Title V permit may be modified, revoked, reopened, reissued, or suspended by the commissioner, or the Administrator in accordance with RCSA §22a-174-33(r), CGS §22a-174c, or RCSA §22a-3a-5(d).

X. REOPENING FOR CAUSE [RCSA §22a-174-33(s)]

This Title V permit may be reopened by the commissioner, or the Administrator in accordance with RCSA §22a-174-33(s).

Y. CREDIBLE EVIDENCE

Notwithstanding any other provision of this Title V permit, for the purpose of determining compliance or establishing whether a Permittee has violated or is in violation of any permit condition, nothing in this Title V permit shall preclude the use, including the exclusive use, of any credible evidence or information.

Print for Compliance Certification or Enforcement

Click the button below to generate the appropriate checklist. Be aware that this macro does not work unless you have access to the DEEP D-Drive.

This macro takes anywhere from 2-5 minutes to run. Your computer will look like it is locked up but it is working. Unfortunately the new DEEP virtual computer system makes this process even slower. Please be patient.

Print Enforcement Checklist

Print Compliance Certification