

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 | 075-0244-TV |
|---------------------------------------|------------------|
| Client/Sequence/Town/Premises Numbers | 5772/01/075/766 |
| Date Issued | February 3, 2020 |
| Expiration Date | February 3, 2025 |

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Capitol District Energy Center Cogeneration Associates

Premises location:

490 Capitol Avenue, Hartford, CT 06106

Name of Responsible Official and Title:

Ryan McQueeney – CFO, Hull Street Energy

All the following attached pages, 2 through 72 are hereby incorporated by reference into this Title V permit.

| /s/ Tracy R. Babbidge for | February 3, 2020 |
|---------------------------|------------------|
| Betsey C. Wingfield | Date |
| Deputy Commissioner | |

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List of Abbreviations/Acronyms

Abbreviation/Acronym Description

AEL Allowable Emission Limit
AOS Alternative Operating Scenario

bhp Brake Horse Power
Btu British Thermal Units
CAIR Clean Air Interstate Rule
CAS Chemical Abstracts Service

cf Cubic Feet

CEMs Continuous Emission Monitoring System

CDECCA Capitol District Energy Center Cogeneration Associates

CFR Code of Federal Regulations
CGS Connecticut General Statutes

CO Carbon Monoxide CO₂ Carbon Dioxide

COMS Continuous Opacity Monitoring System
DERC Discrete Emission Reduction Credit

EU Emission Unit

EPA Environmental Protection Agency

FLER Full Load Emission Rate

gal Gallon

GEU Grouped Emission Unit

gm/bk hp-hr Gram per Brake Horse Power Hour

HAP Hazardous Air Pollutant

hr Hour

H₂SO₄ Sulfuric Acid

ISO International Organization for Standardization

lb Pound

MMBtu Million British Thermal Units

 $\begin{array}{ccc} ng/J & Nanograms per Joule \\ NO_2 & Nitrogen Dioxide \\ NO_x & Nitrogen Oxides \\ NSR & New Source Review \\ \end{array}$

 O_2 Oxygen

Order Trading Agreement & Order

Pb Lead

 $\begin{array}{ll} PM_{10} & Particulate\ Matter\ Less\ than\ 10\ Microns \\ PM_{2.5} & Particulate\ Matter\ Less\ than\ 2.5\ Microns \end{array}$

PM Particulate Matter ppm Parts per Million

ppmvd Parts per Million, Volumetric Basis RATA Relative Accuracy Test Audit

RCSA Regulations of Connecticut State Agencies
RICE Reciprocating Internal Combustion Engine

SIC Source Identification Code

SO₂ Sulfur Dioxide

SOS Standard Operating Scenario

tpy Tons per Year

ULSD Ultra Low Sulfur Diesel
VOC Volatile Organic Compound

Definitions

Allowable Emission Limit (AEL) means the applicable Nitrogen Oxide (NOx) emission limit set forth in RCSA §22a-174-22e(d) corresponding to the emission unit described in Table 1 or Table 2 of Trading Agreement and Order No. 8373 (Order No. 8373).

CAIR NOx Ozone Season unit shall be as defined in RCSA §22a-174-22c(a)(1).

Continuous emissions monitoring system or CEMS means the equipment used to sample, analyze, and measure pollutant emissions to provide a permanent record of such emissions expressed in pounds per MMBtu and in tons per day. The following systems are component parts of a CEMS:

- (A) Pollutant concentration monitor;
- (B) Diluent gas monitor (oxygen or carbon dioxide);
- (C) A data acquisition and handling system; and
- (D) Flow monitoring systems (where appropriate).

Discrete Emission Reduction Credit (DERC) means a unit that was generated and approved by the commissioner in accordance with a Trading Agreement and Order issued by the commissioner or generated and approved by the commissioner in accordance with a protocol submitted and approved pursuant to RCSA §22a-174-38. Such unit is equivalent to 1 ton of NOx emissions and may be used for emissions trading in accordance with RCSA §§22a-174-22e(g)(5)(A) and 22e(g)(6)(C), subject to the provisions of Part B of Order No. 8373.

Full Load Emission Rate (FLER) means the NOx emission rate corresponding to each emission unit described in Table 2 of Order No. 8373 that the Permittee shall not cause or allow the emissions of NOx from that emission unit to exceed; and that the Permittee agrees such FLER shall serve as the basis for determining estimated DERCS required in accordance with such order.

Malfunction means any sudden and unavoidable failure of the air pollution control equipment or process equipment or of a process to operate in a normal manner. Failures that are caused entirely or in part by poor maintenance, careless operation or any other preventable condition or breakdown shall not be considered malfunctions.

Non-Ozone Season means the period of consecutive calendar months between two successive Ozone Seasons.

Ozone Season means May 1 through September 30 of each calendar year or such period as defined by the U.S. Environmental Protection Agency subsequent to the issuance of Order No. 8373.

Startup shall be defined as that period of time from initiation of combustion turbine firing until the unit reaches steady-state operation.

Shutdown shall be defined as the period of time from the initial lowering of turbine output to when the combustion process has stopped.

Title V Permit

All conditions in Sections III through V, VII, and VIII of this 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 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 through VIII (except Section VI) of this Title V permit in accordance with the Clean Air Act, as amended.

Section I: Premises Information/Description

A. PREMISES INFORMATION

Nature of Business: Electricity and steam generation

Primary SIC: 4911

Facility Mailing Address: Capitol District Energy Center Cogeneration Associates

490 Capitol Avenue Hartford, CT 06106

Telephone Number: (860) 293-1990

B. PREMISES DESCRIPTION

Capitol District Energy Center Cogeneration Associates (CDECCA) began commercial operation of the Capitol District Energy Center facility on February 2, 1989. The facility is a combined-cycle cogeneration plant producing electricity and thermal products through a simple topping cycle. The facility consists of a General Electric model PG 6531(Frame 6) combined cycle gas turbine generator with an in-line duct burner, a three pressure waste heat boiler, a condensing/extraction steam turbine, one 900-ton two-stage absorption chiller, one 900-ton and two 1800-ton centrifugal chillers, a Detroit diesel starter engine, a feed water pump engine and two package boilers to provide backup steam to the steam loop. The duct burner cannot physically operate unless the gas turbine is operating.

The facility produces and sells wholesale electricity, steam, and chilled water.

The package boilers are used to produce steam when the gas turbine is not operating. Only one of the package boilers is allowed to be operated at a time.

The gas turbine and duct burner are subject to the Acid Rain Program requirements in 40 CFR Parts 72 - 78. The gas turbine is subject to 40 CFR Part 60 Subpart GG, while the duct burner and the Zurn package boiler are both subject to 40 CFR Part 60 Subpart Db. The Cleaver Brooks package boiler is subject to 40 CFR Part 60 Subpart Dc.

The package boilers are not subject to 40 CFR Part 63 Subpart JJJJJJ in accordance with 43 CFR §63.11195 as long as meet the definition of a gas fired boiler in accordance with 40 CFR §63.11237.

The Detroit diesel starter engine and diesel powered boiler feed water pump engine are existing affected sources subject to 40 CFR Part 63 Subpart ZZZZ. The Detroit diesel starter engine and diesel powered boiler feed water pump engine meet the definitions of a black start engine and an emergency stationary RICE, respectively, in accordance with 40 CFR §63.6675.

The steam turbine and the adsorption chiller do not emit any regulated pollutants. The electric driven centrifugal chillers contain R-114 (CFC-114: Dichlorotetrafluoroethane, CAS No. 76-14-2) and R-123 (HCFC-123: Dichlorotrifluoroethane, CAS No. 306-83-2) as refrigerants and are therefore subject to 40 CFR Part 82, Protection of Stratospheric Ozone. Applicable requirements for the chillers are provided in 40 CFR Part 82 Subpart F, Recycling and Emissions Reduction.

CDECCA exceeds the major source threshold for the following pollutants: NOx, CO, and VOCs CDECCA is not a major source of HAPs.

CDECCA is a Title V source located in a serious ozone non-attainment area defined in RCSA §22a-174-1(103).

Section II: Emissions Units Information

A. EMISSIONS UNITS DESCRIPTION

Emission 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 Units | Emissions Unit Description | Size Rating/ Design Capacity | Control Unit Description | Monitoring Unit Description | Permit, Order, or Regulation No. | |
| EU-1 | General Electric Gas Turbine, Model PG 6531(Frame 6) Constructed in 1987 | 1. 520.8 MMBtu/hr (ULSD fuel oil) 2. 548.2 MMBtu/hr (natural gas) | Steam Injection to Control NOx | NOx-diluent CEMS meeting the requirements of 40 CFR Part 60 Subpart GG and/or 40 CFR Part 75 SO₂ analyzer or an SO₂ monitoring system meeting the requirements of 40 CFR Part 75, Appendix D Opacity Monitor meeting the requirements of RCSA §22a-174-4 | P 075-0064 40 CFR Part 60 Subpart GG 40 CFR Parts 72, 73, 75, 77 & 78 Order No. 8373 RCSA §22a-174-22c RCSA §22a-174-22e | |
| EU-2 | John Zink Duct Burner, S/N DB- 553840 Constructed in 1987 | 1. 187.4 MMBtu/hr (ULSD fuel oil) 2. 190.6 MMBtu/hr (natural gas) | Low NO _x Burner | NOx-diluent CEMS meeting the requirements of 40 CFR part 60 Subpart Db and/or 40 CFR Part 75 SO₂ analyzer or an SO₂ monitoring system meeting the requirements of 40 CFR Part 75, Appendix D Opacity Monitor meeting the requirements of 40 CFR Part 60 Subpart Db | P 075-0064 40 CFR Part 60 Subpart Db 40 CFR Parts 72, 73, 75, 77 & 78 Order No. 8373 RCSA §22a-174-22c RCSA §22a-174-22e | |

Section II: Emissions Units Information

| | TABLE II.A: EMISSIONS UNITS DESCRIPTION, Continued | | | | | | |
|--|--|---|---|--|---|--|--|
| Emissions Unit Units Description | | | Size Rating/ Design Capacity | Control Unit Description | Monitoring Unit Description | Permit, Order, Registration No.; Regulations; or Standard | |
| EU-3 Zurn Package Boiler S/N 101087 | | | 1. 187.4 MMBtu/hr (No. 2 fuel oil) 2. 194.8 MMBtu/hr (natural gas) | Low NO _x Burner and Efficient Combustion Controls | NOx analyzer meeting the requirements of 40 CFR Part 60 Subpart Db SO₂ fuel receipts in accordance with 40 CFR §60.49b(r) and the use of very low sulfur oil as defined in 40 CFR §60.41b CO₂ analyzer meeting the requirements of 40 CFR Part 60 Subpart Db Opacity Monitor meeting the requirements of 40 CFR Part 60 Subpart Db | P 075-0065 40 CFR Part 60 Subpart Db; 40 CFR §60.47b(f) RCSA §22a-174-22e | |
| Eu-4 71 73 | | Detroit Diesel Starter Engine Model # 12V- 71-IT, Engine # 7123- 7300 Constructed in 1987 | 5.81 MMBtu/hr (ULSD fuel oil) | None | None | P 075-0150 40 CFR Part 63 Subpart ZZZZ Order No. 8373 RCSA §22a-174-22e | |
| EU-10 | | Diesel Powered Boiler Feed Water Pump Engine | 0.16 MMBtu/hr | None | None | 40 CFR Part 63 Subpart ZZZZ | |
| EU-15 Centrifuga | | Centrifugal Chiller | 1800 ton cooling capacity (5,000 lb Freon 114) | None | None | 40 CFR Part 82 Subpart F | |
| GEU-2 | EU-18 | Centrifugal Chiller, Trane Model CVH 910 | 900 ton cooling capacity (1,450 lb R-123 refrigerant) | None | None | 40 CFR Part 82 Subpart F | |
| | EU-19 | Centrifugal Chiller, Trane Model CVHF1720 | 1800 ton cooling capacity (2,700 lb R-123 refrigerant) | None | None | 40 CFR Part 82 Subpart F | |
| EU-17 | | Dual-fuel, Cleaver- Brooks Package Boiler | 32.659 MMBtu/hr (natural gas) 25 MMBtu/hr (No. 2 fuel oil) | Low NOx Burner | None | 1. RCSA §22a-174- 3b(c) 2. 40 CFR Part 60 Subpart Dc 3. RCSA §22a-174-22e | |

Section II: Emissions Units Information

B. OPERATING SCENARIO IDENTIFICATION

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

| TABLE II.B: OPERATING SCENARIO IDENTIFICATION | | | | | |
|---|--|--|--|--|--|
| Identification of Operating Scenarios | Emissions Unit(s) Associated with the Scenarios | Description of Scenarios | | | |
| SOS | EU-1 & EU-2 | Both units firing natural gas. EU-2 shall only operate when EU-1 is operating. | | | |
| SOS | EU-3 | EU-3 firing natural gas. EU-3 shall only operate when EU-2 is not operating (i.e. EU-1 & EU-3 may operate simultaneously, typically during startup or shutdown of EU-1 or while performing emissions testing or RATA on EU-3, as long as EU-2 is not also operating) | | | |
| sos | EU-4 | EU-4 is the starter engine for EU-1. It operates during startup and shutdown of EU-1, during washing of the turbine blades, and for engine testing and maintenance. EU-4 operates on ULSD fuel oil. | | | |
| SOS | EU-10 | EU-10 firing ULSD fuel oil ≤0.0015% sulfur by weight. | | | |
| SOS | EU-17 | EU-17 firing natural gas. EU-17 shall only operate when EU-2 is not operating (i.e. EU-1 & EU-17 may oper simultaneously, typically during startup or shutdown of EU-1 or while performing emissions testing on EU-1' as long as EU-2 is not operating). | | | |
| SOS | GEU-2 | Chiller units using R-114 or R-123 Refrigerant. | | | |
| | | | | | |
| AOS-1 | EU-1, 2 | EU-1 & 2 firing ULSD fuel oil, \leq 0.0015% sulfur by weight. EU-2 shall only operate when EU-1 is operating | | | |
| AOS-2 | EU-1, 2 | Interchangeable operation of EU-1 & EU-2 on different fuels (ULSD fuel oil and natural gas). EU-2 shall only operate when EU-1 is operating. | | | |
| AOS-3 | EU-1 | EU-1 firing natural gas and EU-2 not operating. | | | |
| AOS-4 | EU-1 | EU-1 firing ULSD fuel oil $\leq 0.0015\%$ sulfur by weight and EU-2 not operating. | | | |
| AOS-5 | EU-3 | EU-3 firing fuel oil meeting the sulfur limitations of RCSA §22a-174-19b. EU-3 shall only operate when EU-2 is not operating (i.e. EU-1 and EU-3 may operate simultaneously, typically during startup or shutdown of EU-1 or while performing emissions testing or RATA on EU-3, as long as EU-2 is not also operating). | | | |
| AOS-6 | EU-17 firing fuel oil meeting the sulfur limitations of RCSA §22a-174-19b. EU-17 shall only operations | | | | |

The following contains terms and conditions for the operation and compliance demonstrations of each identified Emissions Unit regulated by this Title V Permit.

A. EMISSIONS UNITS 1 & 2 (EU-1 & 2) - GENERAL ELECTRIC GAS TURBINE (EU-1) AND JOHN ZINK DUCT BURNER (EU-2)

1. Fuel Limitations

- a. Limitation or Restriction
 - i. Fuel Type: Natural Gas (Primary), ULSD Fuel Oil (Back-up) [P 075-0064]
 - ii. Maximum Fuel Oil Sulfur Content (Ultra-Low Sulfur Diesel (ULSD) % by weight): 0.0015 [P 075-0064]
 - iii. Maximum Fuel Oil Lead Content (ppm): 0.54 [075-0064]
 - iv. Maximum Allowable Firing Rate for Turbine (ULSD): 3,628 gal/hr [P 075-0064]
 - v. Maximum Allowable Firing Rate for Duct Burner (Natural Gas): 134,800 cf/hr [P 075-0064]
 - vi. Maximum Allowable Firing Rate for Duct Burner (ULSD): 1,329.1 gal/hr [P 075-0064]
 - vii. The hourly average fuel firing rate for the gas turbine shall not exceed 3,628 gallons/hour when firing ULSD fuel oil. The hourly average fuel firing rate for the duct burner shall not exceed 134,800 cu ft/hour when firing natural gas. The purpose of these limits is to ensure that the stack emission testing required by Permit No. 075-0064 can be performed at 90% of the maximum fuel firing rates allowed by Permit No. 075-0064. [P 075-0064]
 - viii. The gas turbine and the in-line duct burner may be operated with different fuels when operating concurrently. For example, the gas turbine may burn ULSD fuel oil while the in-line duct burner is burning natural gas, or the gas turbine may burn natural gas while the in-line duct burner is burning ULSD fuel oil. [P 075-0064]
 - ix. The in-line duct burner shall only operate when the gas turbine is operational and cannot physically operate when the gas turbine is not operational. [P 075-0064]

b. Monitoring and Testing Requirements

- i. The Permittee shall operate and maintain this equipment in accordance with the manufacturer's specifications and written recommendations. [P 075-0064]
- ii. Fuel firing rates for the gas turbine and duct burner shall be monitored on a 1 hour block average using the applicable procedures in 40 CFR Part 75, Appendix D. [P 075-064]
- iii. The sulfur content of the fuel shall be monitored in accordance with 40 CFR §\$60.334(h) and (i) or an alternative monitoring plan approved by the Administrator. [40 CFR §60.334(h); P 075-0064]
- iv. The frequency of determining the sulfur content of the fuel shall be in accordance with 40 CFR §60.334(i) or §60.334(h)(3) or (4) as applicable. [40 CFR §60.334]

c. Record Keeping Requirements

i. The Permittee shall record and maintain separate daily records of the type and amount of fuel (natural gas or ULSD fuel oil) fired in both the turbine and duct burner. [P 075-0064]

- ii. 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 and made available for inspection by the commissioner upon request. [P-075-0064]
- iii. The Permittee shall record and maintain records of the amounts of each fuel combusted in the duct burner during each day and calculate the annual capacity factor individually for ULSD fuel oil and natural gas for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

 [P 075-0064]
- iv. Each fuel oil shipment for this equipment shall include a shipping receipt from the fuel supplier and a certification from the fuel supplier certifying the type of fuel in the shipment and the weight percent of sulfur in the fuel. [P 075-0064]
- v. The Permittee shall obtain and maintain at the premises, fuel receipts from the fuel supplier which certify that the oil is ULSD fuel oil containing 0.0015% or less sulfur by weight. [P 075-0064; 40 CFR §60.49b(r)]
- vi. The Permittee shall keep records of the sulfur content of ULSD fuel oil combusted including the following: [P 075-0064]
 - (A) Date of any fuel sampling and analysis performed in accordance with 40 CFR §§60.334(h) and (i) and
 - (B) Percent sulfur content (by weight) as determined from fuel oil analysis or specified in a fuel certification from the supplier.
- vii. The Permittee shall keep records indicating continual compliance with Section III.A.1 of this Title V permit on site at all times and shall make such records available upon Bureau request for the previous five years. [P 075-0064]

d. Reporting Requirements

- i. If ULSD fuel oil is fired in the duct burner the Permittee shall report the date on which the fuel was used and the amount fired to the commissioner, within three working days of the usage.

 [P 075-0064]
- ii. The Permittee shall submit to the commissioner reports certifying that only ULSD fuel oil containing 0.0015% or less sulfur by weight was combusted in the affected facility during the reporting period. [P 075-0064; 40 CFR §60.49b(r)(1)]
- iii. The Permittee shall on a daily basis review data recorded and calculated for that day and report to the commissioner, within three working days, any exceedances of an emission limit. [P 075-0064]
- iv. 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

a. Limitation or Restriction

The Permittee shall not exceed the emission limits stated herein except as allowed in this Title V permit during periods of startup and shutdown.

- i. The NOx emissions when firing natural gas in the turbine or in the turbine and duct burner shall not exceed 42 ppmvd @ 15% O₂ (0.149 lb/MMBtu). In addition, the NOx target level when firing natural gas shall be 30 ppmvd @ 15% O₂ (0.106 lb/MMBtu). [P 075-0064]
- ii. The NOx emissions when firing natural gas in the turbine shall not exceed 81.5 lb/hr. In addition, the NOx target level when firing natural gas shall be 58.2 lb/hr. [P 075-0064]
- iii. The NOx emissions when firing natural gas in the turbine and duct burner shall not exceed 107.4 lb/hr. In addition, the NOx target level when firing natural gas shall be 76.7 lb/hr. [P 075-0064]
- iv. The NOx emissions when firing ULSD fuel oil in the turbine or in the turbine and duct burner, shall not exceed 62 ppmvd @ 15% O₂ (0.240 lb/MMBtu). In addition, the NOx target level when firing ULSD fuel oil in the turbine shall be 60 ppmvd @ 15% O₂ (0.226 lb/MMBtu, turbine; 0.232 lb/MMBtu/hr, turbine and duct burner). [P 075-0064]
- v. The NOx emissions when firing ULSD fuel oil in the turbine shall not exceed 124.9 lb/hr. In addition, the NOx target level when firing ULSD fuel oil shall be 117.7 lb/hr. [P 075-0064]
- vi. The NOx emissions when firing ULSD fuel oil in the turbine and duct burner shall not exceed 151.5 lb/hr. In addition, the NOx target level when firing ULSD fuel oil shall be 146.6 lb/hr. [P 075-0064]
- vii. The NOx emissions when firing natural gas in the turbine and ULSD fuel oil in the duct burner shall not exceed 107.4 lb/hr. In addition, the NOx target level when firing natural gas in the turbine and ULSD fuel oil in the duct burner shall be 76.7 lb/hr. [P 075-0064]
- viii. The NOx emissions when firing natural gas in the turbine and ULSD fuel oil in the duct burner, shall not exceed 42 ppmvd @ 15% O₂ (0.149 lb/MMBtu). In addition, the NOx target level when firing natural gas in the turbine and ULSD fuel oil in the duct burner shall be 30 ppmvd @ 15% O₂ (0.106 lb/MMBtu). [P 075-0064]
- ix. The NOx emissions when firing ULSD fuel oil in the turbine and natural gas in the duct burner shall not exceed 150.8 lb/hr. [P 075-0064]
- x. The NOx emissions when firing ULSD fuel oil in the turbine and natural gas in duct burner, shall not exceed 62 ppmvd @ 15% O₂ (0.240 lb/MMBtu). [P 075-0064]
- xi. The total NOx emissions from the turbine, duct burner and package boiler (EU-3) shall not exceed 700.0 tpy. In addition, the NOx target value from the turbine, duct burner and package boiler (EU-3) shall be 642.1 tpy. [P 075-0064]
- xii. The non-ozone seasonal average (both fuels) allowable emission limit for NOx emissions for the turbine and the duct burner shall not exceed 0.15 lb/MMBtu. The Permittee may comply with this limit by using emission trading per RCSA §22a-174-22e(g)(5)(A) and Order No. 8373. [RCSA §22a-174-22e(g)(5)(A); Order No. 8373]

xiii. The Permittee shall control NOx emissions with steam injection. During initial startup and warm-up, it is understood that steam is not available; however, steam injection shall be put in operation as soon as possible. This does not imply approval to exceed any state or federal excess emissions requirement that results from cumulative control downtime. [P 075-0064]

b. Monitoring and Testing Requirements

- i. The Permittee shall install, calibrate, maintain, and operate, a continuous emission monitoring system (CEMS) and recording systems for measuring NOx discharged to the atmosphere and shall record the output of the system. [P 075-0064]
- ii. The CEMS and the recorders shall be installed, calibrated, operated and tested in accordance with RCSA §22a-174-4(c), RCSA §22a-174-22c, and with the requirements specified in 40 CFR Part 60 Subpart A, Appendices B and Appendix F, and 40 CFR Part 75 (as applicable), as may be amended from time to time. In lieu of the requirements specified in 40 CFR Part 60, Appendixes B and F, the NOx CEMS shall be operated and maintained with the requirements of 40 CFR 75, Appendices A and B. [P 075-0064]
- iii. Performance testing or quality assurance relative accuracy test audit (RATA) testing of the CEMS shall be conducted in accordance with a testing protocol approved by the commissioner. [P 075-0064; RCSA §22a-174-22e(m)(4)]
- iv. The Permittee shall use data recorded by the CEMS and any other records and reports to determine compliance with NOx emission limits. The CEMS shall be capable of calculating emission concentrations corrected to 15% O₂. [P 075-0064]
- v. The averaging times for all periods of operation for the emission limitations with the use of the CEMS shall be 1-hour block average. [P 075-0064]
- vi. The Permittee shall utilize CEMS for NOx in accordance with 40 CFR §60.334(b) as an alternative to respectively, monitoring of the water-to-fuel ratio required under 40 CFR §60.334(a) to estimate NOx emissions, and monitoring of the nitrogen content of the fuel under 40 CFR §60.334(b). [40 CFR §60.334(b)]
- vii. The NOx emissions shall be controlled with steam injection. The maximum steam/fuel ratio shall not exceed 1.51/1. The maximum allowable rate of steam injection shall be 36,000 lb/hr. [P 075-0064]
- viii. If the NOx emission target limits (30 ppmvd @ 15% O₂ for natural gas firing and 60 ppmvd @ 15% O₂ for ULSD fuel oil firing) are exceeded by 6 ppmvd @ 15% O₂ based upon CEMS data (24 consecutive 1-hr block averages), the Permittee shall immediately make operational changes designed to bring NOx emissions in line with the given limitations. The Department recognizes however, that any such operating practices must be in conformance with the manufacturer's recommended operating procedures and warranty requirements. [P 075-0064]
- ix. The turbine shall be shut down when measured NOx emissions levels acceptable to the commissioner or CEMS NOx data based on 24 consecutive 1-hr block averages exceeds 42 ppmvd @ 15% O₂ when firing natural gas or 62 ppmvd @ 15% O₂ when firing No. 2 fuel oil. [P 075-0064]
- x. If required by the commissioner, the Permittee shall measure NOx emissions using EPA Method 7E stack test. [RCSA §22a-174-5f]

- xi. The Permittee shall perform maintenance and inspection of the turbine and duct burner on or before April 27, 2019. Such maintenance and inspection shall include, but not be limited to the following: [Order No. 8373]
 - (A) 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;
 - (B) 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
 - (C) 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 maintain records of the following information for each steam generating unit operating day: [40 CFR §60.49b(g)]
 - (A) Calendar date.
 - (B) The average hourly nitrogen oxides emission rates (expressed as NO₂) (ng/J or lb/million Btu heat input) measured or predicted.
 - (C) The 30-day average nitrogen oxides emission rates (ng/J or lb/million Btu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.
 - (D) Identification of the steam generating unit operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the applicable nitrogen oxides emissions standard in 40 CFR Part 60 Subpart Db, with the reasons for such excess emissions as well as a description of corrective actions taken.
 - (E) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken.
 - (F) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data.
 - (G) Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system.
 - (H) Description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with the requirements in Section III.A.2.b of this Title V permit.
 - (I) Results of daily CEMS drift tests and quarterly accuracy assessments as required under 40 CFR Part 60, Appendix F, Procedure 1.

- ii. The Permittee shall make and keep records including, but not limited to, the following: [Order No. 8373]
 - (A) Demonstration that any maintenance, tune-up, and/or inspection activity performed on the emission unit in accordance with Section III.A.2.b.xi of this Title V permit 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 in accordance with Section III.A.2.b.xi of this Title V permit,
 - (C) The name, title and affiliation of the person conducting any maintenance, tune-up, and/or inspection activity performed on the emission unit in accordance with Section III.A.2.b.xi of this Title V permit, and
 - (D) The operating parameters of the emission units 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 Section III.A.2.b.xi of this Title V permit.
- iii. The Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. [40 CFR §60.7(b)]
- iv. The Permittee shall keep records of the date and work performed for repairs, replacement of parts and other maintenance. [RCSA §22a-174-22e(j)(2)(B)]
- v. The Permittee shall keep records of the dates and times of all emission testing required by this Title V permit, 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)]
- vi. The Permittee shall keep copies of all documents submitted to the commissioner pursuant to RCSA \$22a-174-22e and any other records or reports required by Order No. 8373 [RCSA §\$22a-174-22e(j)(2)(F), -22e(2)(j)(G)]
- vii. The Permittee shall keep all charts, electronically stored data, and printed records produced by the NOx continuous emissions monitor as needed to demonstrate compliance with the requirements of RCSA §22a-174-22e. [RCSA §22a-174-22e(j)(2)(D)(iv)]
- viii. The Permittee shall keep records of the annual NOx emissions by, adding the current month's NOx emissions to the previous 11 month's emissions. The Permittee shall make these calculations within 30 days of the end of the previous month and made available for inspection by this Bureau upon request. [P 075-0064]
- ix. The Permittee shall keep records of all performance evaluations, calibration checks and adjustments on CEMS; a record of maintenance procedures; and all data necessary to complete the quarterly reports required by the Department.

 [RCSA §§22a-174-22e(j)(D)(i), 22e(j)(D)(ii), and -22e(j)(D)(iii)]
- x. The Permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance and performed on these systems or devices; and all other information required by this Title V permit recorded in a permanent form suitable for inspection. The file shall be retained for at least five years following the date of such measurements, maintenance, reports, or

records, except as specified in 40 CFR §60.7(f). [P 075-0064]

- xi. The Permittee shall maintain reports of all monitoring and test data in accordance with RCSA §22a-174-4(d). [RCSA §22a-174-4(d)]
- xii. The Permittee shall keep records on the premises indicating continual compliance with all permit conditions at all times and shall make such records available upon Bureau request for the previous five years. [P 075-0064]
- xiii. Not more than 30 days after the completion of each Non-Ozone Season, the Permittee shall record the Non-Ozone Season average NOx emission rate for the turbine and duct burner, the quantity of DERCs possessed on the first day of the Non-Ozone Season, and the quantity of DERCs deducted in accordance with Sections III.A.2.e.x of this Title V permit. [Order No. 8373]
- xiv. On each day, during the Ozone Season, that the Permittee operates in accordance with Section III.A.2.e.viii of this Title V permit, the Permittee shall make and keep records of all emissions unit operations in accordance with Section III.A.2.e.viii of this Title V permit, including copies of all written correspondence demonstrating that operations are due to one or more of the factors described in Section III.A.2.e.viii of this Title V permit. [Order No. 8373]
- xv. The Permittee shall retain records and supporting documentation required by Order No. 8373 for a minimum of five years, commencing on the date such records were created. The Permittee shall provide the records specified above to the commissioner within 30 days of receipt of a written request from the commissioner. All records shall be maintained in accordance with RCSA §§ 22a-174-4 and 22a-174-22e. [Order No. 8373]

d. Reporting Requirements

- i. The Permittee shall, on a daily basis review data recorded and calculated for that day and report to the commissioner, within three working days, any exceedances of an emission limit. [P 075-0064]
- ii. The Permittee shall submit to the commissioner and the Administrator a notification of any physical or operational change to the turbine and or the duct burner which may increase the emission rate of NO_x unless that change is specifically exempted under an applicable subpart or in 40 CFR §60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The commissioner and the Administrator may request additional relevant information subsequent to this notice. [40 CFR §60.7(a)(4)]
- iii. The Permittee shall submit reports of excess emissions and monitoring downtime, in accordance with 40 CFR §§60.7(c) and 60.334(j)(1)(iii). [40 CFR §60.7(c); 60.334(j)(1)(iii)]
- If there are no excess emissions during the calendar quarter, the Permittee shall submit to the iv. commissioner and the Administrator, a report semiannually stating that no excess emissions occurred during the semiannual reporting period. [40 CFR §60.49b(h)]
- v. The Permittee shall notify the commissioner in writing at least 30 days prior to conducting any performance or quality assurance testing of any CEM for NOx. [RCSA §22a-174-22e(m)(4)]
- vi. Within 60 days of the completion of certification tests conducted on the CEMS, the Permittee shall submit a written report of the results of such testing to the commissioner and the Administrator. [RCSA §22a-174-22e(k)(2); 40 CFR §60.49b(b)]

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- vii. Not later than July 30 of each calendar year, the Permittee shall submit a written report containing copies of all records required pursuant to Sections III.A.2.c.xiv and xv of this Title V permit. 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. [Order No. 8373]
- viii. The Permittee shall use best efforts to submit to the commissioner all documents required by Order No. 8373 in a complete and approvable form. If the commissioner notifies Permittee that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and Permittee shall correct the deficiencies and resubmit it within the time specified by the commissioner or, if no time is specified by the commissioner, within 30 days of the commissioner's notice of deficiencies. In approving any document or other action under Order No. 8373, the commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the commissioner deems necessary to carry out the purposes of Order No. 8373. Nothing in this section shall excuse noncompliance or delay. [Order No. 8373]
- ix. 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)]

e. Operating Requirements

- i. The Permittee shall operate and maintain this equipment in accordance with the manufacturer's specifications and written recommendations. [P 075-0064]
- ii. During any air pollution emergency episode that occurs, the turbine and duct burner shall be operated in accordance with the Updated facility Emergency Episode Plans submitted to the Department, pursuant to RCSA §22a-174-6. [P 075-0064]
- iii. Pursuant to RCSA §22a-174-22e(g)(5)(A), the Permittee shall comply with RCSA §22a-174-22e(d), when operating the turbine and duct burner and burning the corresponding fuels, by means of emissions trading in accordance with the provisions of Order No. 8373. [Order No. 8373]
- iv. The Permittee shall use the actual NO_x emission rate measured by CEMS for the purposes of calculating Actual DERCs required for the turbine and duct burner. [Order No. 8373]
- v. The Permittee shall obtain and use sufficient DERCs in such a manner as to comply with Sections III.A.2.e.ix, x, xi and xii of this Title V permit. [Order No. 8373]
- vi. For the purposes of compliance with RCSA §22a-174-22e(g)(5) and the provisions of Order No. 8373, 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(g)(5)(A) and the provisions of Order No. 8373.

 [Order No. 8373]
- vii. Ozone Season Fuel Use Restriction: Notwithstanding the requirements of Section III.A.2.e.iii of this Title V permit, when operating the turbine and duct burner during the Ozone Season, the Permittee shall operate the turbine and duct burner while firing or co-firing the lowest NOx emitting fuel type or combination of fuel types that the turbine and duct burner are authorized to burn in accordance with Departmental permit, registration, or applicable regulation.

 [Order No. 8373]

- viii. Notwithstanding Section III.A.2.e.vii of this Title V permit, during the Ozone Season, the Permittee may operate the turbine and duct burner on fuels that result in higher emissions of NOx, if either: [Order No. 8373]
 - (A) the availability of fuel oil that complies with Section III.A.2.e.vii of this Title V permit 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 turbine and duct burner is interrupted due to inadequate supply or in accordance with an interruptible supply agreement between the Permittee and the gaseous fuel supplier.
 - (C) the purchase of the lowest NOx emitting fuel type will prevent the turbine and duct burner from responding to an ISO-New England dispatch directive on a timely basis under an emergency power shortage event in Connecticut or the ISO-NE region.
 - (D) 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.
- ix. 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 shall be determined as follows: [Order No. 8373]
 - (A) Before the first day of each month, the Permittee shall estimate DERCs required for such calendar month for the turbine and duct burner using the applicable daily block average AELs for the turbine and duct burner in Table 1 of Order No. 8373, and as included in Table III.A.2 of this Title V permit, as follows:

Estimated DERCs Required (Table 1) =

{(Estimated fuel use in MMBtu) x ((estimated daily block average NOx emission rate lb/MMBtu) - $(0.95 \ x \ AEL)$)} \div 2000 lb/ton

Where:

- AEL: Allowable Emission Limit as defined in this Title V Permit and Order No. 8373.
- 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 all operating days when the actual daily block average NOx emission rate from the turbine and duct burner exceed the AEL as follows:

Actual DERCs Required (Table 1) = Σ {(Actual fuel use in MMBtu) x ((Actual daily block average NOx emission rate lb/MMBtu) – (0.95 x Proportioned AEL*))} \div 2000 lb/ton

Total Actual DERCs Required = Actual DERCs Required (Table 1) + Actual DERCs Required (Table 2)

Actual DERCs Required (Table 2) shall be as calculated pursuant to Section III.C.3.e.vi(B) of this Title V permit.

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* The Proportioned AEL shall be calculated by 1) multiplying the heat input of each fuel combusted by the AEL for such fuel; 2) summing those products; and 3) dividing the sum by the total heat input.

- x. Non-Ozone Season DERC Use. 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 shall be determined as follows: [Order No. 8373]
 - (A) Before the first day of each Non-Ozone Season, the Permittee shall estimate DERCs required for that Non-Ozone Season for the turbine and duct burner based on the average actual NOx emission rate from the turbine and duct burner and an emission limit of 0.15 lb/MMBtu as follows:

Estimated Non-Ozone Season DERCs Required =

{(Estimated Non-Ozone Season fuel use in MMBtu) x ((estimated average NOx Emission Rate lb/MMBtu) – $(0.95 \times 0.15 lb/MMBtu0)$)} $\div 2000 lb/ton$

(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 turbine and duct burner as follows:

Actual Non-Ozone Season DERCs Required =

{(Actual Non-Ozone Season fuel use in MMBtu) x ((Non-Ozone Season Average Actual NOx Emission Rate lb/MMBtu) - (0.95 x 0.15 lb/MMBtu))} \div 2000 lb/ton - Σ (Actual DERCs Required (Table 1) for all months of the Non-Ozone Season calculated pursuant to Section III.A.2.e.ix.(B) of this Title V permit.

- xi. 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 Section III.A.2.e.ix.(B) of this Title V permit for the preceding calendar year, rounded up to the nearest whole ton. [Order No. 8373]
- xii. Not more than 30 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 calculated pursuant to Section III.A.2.e.x.(B) of this Title V permit. [Order No. 8373]

| TABLE III.A.2 AFFECTED UNITS | | | |
|---|-------------------------|----------------|---|
| Emission Units- Permit No. 075-0064 Heat Input (MMBtu) Allowable Emission Limit (A | | | |
| GE PG6531 Cogeneration Turbine and Duct Burner | Natural Gas No.2 Oil | 738.8 708.2 | 42 ppmvd daily block average (0.155 lb/MMBtu) 65 ppmvd daily block average (0.254 lb/MMBtu) 0.15 lb/MMBtu non-ozone season average (both fuels) |

3. NOx – RCSA §22a-174-22e (Phase 1 & Phase 2 Requirements)

- a. Limitation or Restriction
 - i. Prior to June 1, 2023, unless allowed in accordance with Order No. 8373, the Permittee shall not cause or allow emissions of NOx for the turbine or the turbine and duct burner to exceed the following:

[RCSA §§22a-174-22e(d)(5)(A) and (B) and §22a-174-22e(d)(16)]

Note: Pursuant to RCSA §22a-174-22e(a)(1)(A), the turbine is an "affected unit" because the turbine has a nameplate capacity greater than 15 MW.

(A) Phase 1

- (1) The following emission limitations based on a daily block average for an emission unit with a NOx CEM system:
 - (a) Natural Gas: 42 ppmvd @ 15% O₂
 - (b) No. 2 Fuel Oil: 65 ppmvd @ 15% O₂
- (2) The following non-ozone season emissions limitations apply to the owner or operator of a combined cycle combustion turbine that is also an affected unit. The averaging period for the non-ozone season limit is October 1 through April 30 (seven month average)
 - (a) Natural Gas (non-ozone season): 0.15 lb/MMBtu
 - (b) No. 2 Fuel Oil (non-ozone season): 0.15 lb/MMBtu
- ii. On or after June 1, 2023 the Permittee shall either: [RCSA §22a-174-22e(d)(5)(C), (D) and §22a-174-22e(d)(16)]
 - (A) Phase 2
 - (1) Not to cause or allow emission of NOx to exceed the following emissions limitations, based on a daily block average for an emission unit with a NOx CEM system:
 - (a) Natural Gas: 25 ppmvd @ 15% O₂
 - (b) No. 2 Fuel Oil: 42 ppmvd @ 15% O₂, and
 - (2) Not cause or allow emissions of NOx to exceed the following non-ozone season emission limitation applies to a combined cycle combustion turbine that is also an affected unit.

The averaging period for the non-ozone season is October 1 through April 30 (seven month average):

- (a) Natural Gas: 0.15 lb/MMBtu
- (b) No. 2 Fuel Oil: 0.15 lb/MM/Btu
- (3) A daily block average includes all periods of operation, excerpt as provided in RCSA §22a-174-22e(m)(3). [RCSA §22a-174-22e(d)(11)(C)]
- (4) The Permittee shall calculate an emission unit's non-ozone season emission rate as the sum of the emission unit's NOx emission during the period from October 1 through April 30, inclusive, divided by the sum of the emission unit's heat input during the period from October 1 through April 30, inclusive. [RCSA §22a-174-22e(d)(19)]
- (B) Operate in accordance with a compliance option approved by the Department in accordance with RCSA §22a-174-22e(g), or
- (C) Operates under a case-by-case RACT determination in accordance with RCSA§22a-174-22e(h), or
- (D) Cease operation in accordance with RCSA §22a-174-22e(f).
- b. Monitoring and Testing Requirements
 - i. The Permittee shall calibrate, maintain, operate and certify the CEM system to demonstrate compliance with RCSA §22a-174-22e. [RCSA §22a-174-22e(m)(1)]
 - ii. The Permittee shall collect quality assured CEM data for all emission unit operating conditions. Data collection shall include periods of startup or shutdown, monitoring system malfunction, out-of-control periods, while conducting maintenance or repairs, and periods of required monitoring system quality assurance or quality control activities, such as calibration checks and required zero and span adjustments. [RCSA §22a-174-22e(m)(2)]
 - iii. Emissions data used to determine compliance with applicable emissions limitations in Section III.A.3 of this Title V permit shall not include data collected during the following periods: [RCSA §22a-174-22e(m)(3)(A) through (D)]
 - (A) When the monitoring system is out-of-control as specified in the facility-specific monitoring plan;
 - (B) While conducting required monitoring system quality assurance or quality control activities, including calibration checks and required zero and span adjustments;
 - (C) While conducting maintenance or repairs of the monitoring system to prevent or correct a malfunction; or
 - (D) When the emission unit is not operating.
 - iv. The Permittee shall notify the commissioner in writing at least 30 days prior to conducting performance or quality assurance testing of any CEM for NOx. Any such testing shall be conducted in accordance with a testing protocol approved by the commissioner. Any CEM for NOx shall be installed, calibrated and operated in accordance with the performance and quality assurance specifications contained in 40 CFR Part 75. [RCSA §22a-174-22e(m)(4)]

Compliance with the seasonal limits of section III.A.3.a of this Title V permit shall be determined v. using emissions and operating data for the entire five-month period for an ozone season emissions limitation or for the entire seven-month period for a non-ozone season emissions limitation, except for the 2023 ozone season compliance shall be determined based on data collected June 1 through September 30.

c. Record Keeping Requirements

- The Permittee of an emission unit subject to RCSA §22a-174-22e shall make and keep the following records on and after May 1, 2018: [RCSA §22a-174-22e(j)(2)]
 - (A) The date and work performed for repairs, replacement of parts and other maintenance.
 - (B) CEM requirements:
 - Records of all performance evaluations, calibrations checks and adjustments on such (1) Monitor;
 - A record of maintenance performed; (2)
 - (3) All data necessary to complete quarterly reports required under RCSA §22a-174-22e(k)(3); and
 - (4) Charts, electronically stored data, and printed records produced by such CEM system as needed to demonstrate compliance.
 - Copies of all documents submitted to the commissioner pursuant to RCSA §22a-174-22e; (C)
 - (D) CEM requirements:
 - Records of all performance evaluations, calibrations checks and adjustments on such (1) monitor,
 - (2) A record of maintenance performed,
 - All data necessary to complete quarterly reports required under RCSA §22a-174-(3) 22e(k)(3), and
 - (4) Charts, electronically stored data, and printed records produced by such CEM system as needed to demonstrate compliance.
- ii. The Permittee shall keep any records or reports required by an order or permit issued by the commissioner. [RCSA §22a-174-22e(j)(2)(G)]
- The Permittee shall retain all records and reports produced pursuant to RCSA §22a-174-22e for five iii. years. Such records and reports shall be available for inspection at reasonable hours by the commissioner or the Administrator. Such records shall be retained at the premises where the emission unit is located, unless the commissioner approves in writing the use of another location in Connecticut. [RCSA §22a-174-22e(j)(1)]

d. Reporting Requirements

- i. The Permittee shall submit, on forms prescribed by the commissioner, written quarterly reports of excess emissions and CEM system malfunctions. Such reports shall be submitted to the commissioner on or before January 30, April 30, July 30 and October 30 of each year. The reports shall have the information required in RCSA §22a-174-22e(k)(3). [RCSA §22a-174-22e(k)(3)]
- ii. Upon written notice, the commissioner may require the Permittee to provide all hourly CEM data, in a format acceptable to the commissioner, for the three calendar month period identified in such written notice. [RCSA §22a-174-22e(k)(4)]

4. SO₂

a. Limitation or Restriction

- i. The SO₂ emissions when firing natural gas in the turbine shall not exceed 0.33 lb/hr. [P 075-0064]
- ii. The SO₂ emissions when firing natural gas in the turbine and duct burner shall not exceed 0.45 lb/hr. [P 075-0064]
- iii. The SO₂ emissions when firing ULSD fuel oil in the turbine shall not exceed 0.90 lb/hr. [P 075-0064]
- iv. The SO₂ emissions when firing ULSD fuel oil in turbine and duct burner shall not exceed 1.2 lb/hr. [P 075-0064]
- v. The SO₂ emissions when firing natural gas in the turbine and ULSD fuel oil in the duct burner shall not exceed 0.7 lb/hr. [P 075-0064]
- vi. The SO₂ emissions when firing ULSD fuel oil in the turbine and natural gas in the duct burner shall not exceed 1.0 lb/hr. [P 075-0064]
- vii. The total SO_x emissions from the turbine, the duct burner, and package boiler (EU-3) shall not exceed 49.2 tpy. [P 075-0064]

b. Monitoring and Testing Requirements

- i. If an SO₂ CEMS is used, at the Permittee's option, the monitor data availability shall be no less than 90% on a quarterly basis, in accordance with the Department specifications. Periods of unavailability, which are the results of daily calibrations and other QA activities, shall be included as downtime. [RCSA §22a-174-4(c)(5)]
- ii. Notwithstanding the above, the Permittee may replace the existing SO₂ CEMS with an SO₂ monitoring system meeting the requirements of 40 CFR Part 75, Appendix D, Optional SO₂ Emissions Data Protocol for Gas Fired and Oil Fired Units. [P 075-0064]
- iii. The Permittee shall comply with the sulfur dioxide emission limits for the in-line duct burner at all times, including periods of startup, shutdown, and malfunction. Compliance with this requirement shall be demonstrated by demonstrating that the ULSD fuel oil meets the definition of very low sulfur oil by the methods in 40 CFR §60.42b(j). [40 CFR §60.42b(g)&(j)]
- iv. Annual SO₂ emissions shall be verified by the Permittee, by adding the current month's SO₂ emissions to the previous 11 month's emissions. [P 075-0064]

v. If required by the commissioner, the Permittee shall measure SO₂ emissions using EPA Method 6 or 6C stack test. [RCSA §22a-174-5(f)]

c. Record Keeping Requirements

- i. The Permittee shall keep records of the annual SO₂ emissions by adding the current month's emission to the previous 11 month's emissions. The Permittee shall make these calculations within 30 days of the previous month and made available for inspection by this Bureau upon request. [P 075-0064]
- ii. Permittee shall keep records on the premise indicating continual compliance with all permit conditions at all times and shall make such records available upon Bureau request for the previous five years. [P 075-0064]
- iii. The Permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance and performed on these systems or devices; and all other information required by this Title V permit recorded in a permanent form suitable for inspection. The file shall be retained for at least five years following the date of such measurements, maintenance, reports, or records, except as specified in 40 CFR §60.7(f). [P 075-0064]

d. Reporting Requirements

- i. The Permittee shall, on a daily basis, review data recorded and calculated for that day and report to the commissioner and Administrator within three working days any exceedances of an emission limit. [P 075-0064]
- ii. The Permittee shall submit to the commissioner and the Administrator a notification of any physical or operational change to the turbine and/or the duct burner which may increase the emission rate of SO_x, unless that change is specifically exempted under an applicable subpart or in 40 CFR §60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The commissioner and the Administrator may request additional relevant information subsequent to this notice.

 [40 CFR §60.7(a)(4)]
- iii. Periodically monitored fuel parameters shall be subject to excess emissions reporting, in accordance with 40 CFR §60.334(j)(2). [40 CFR §60.334(j)(2)]
- iv. 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. TSP/PM₁₀ [TSP (filterable); PM₁₀ (filterable + condensable)]

a. Limitation or Restriction

- i. The TSP/PM_{10} emissions when firing natural gas in the turbine or in turbine and duct burner shall not exceed 0.014 lb/MMBtu. [P 075-0064]
- ii. The TSP/PM₁₀ emissions when firing ULSD in the turbine or in the turbine and duct burner shall

- not exceed 0.035 lb/MMBtu. [P075-0064]
- The TSP/PM₁₀ emissions when firing natural gas in the turbine shall not exceed 7.45 lb/hr. iii. [P 075-0064]
- The TSP/PM₁₀ emissions when firing natural gas in the turbine and duct burner shall not exceed iv. 9.97 lb/hr [P 075-0064]
- The TSP/PM₁₀ emissions when firing ULSD fuel oil in turbine shall not exceed 18.47 lb/hr. v. [P 075-0064]
- The TSP/PM₁₀ emissions when firing ULSD fuel oil in the turbine and duct burner shall not exceed vi. 21.10 lb/hr. [P 075-0064]
- The TSP/PM₁₀ emissions when firing natural gas in the turbine and ULSD fuel oil in the duct vii. burner shall not exceed 10.08 lb/hr [P 075-0064]
- viii. The TSP/PM₁₀ emissions when firing natural gas in the turbine and ULSD fuel oil in the duct burner shall not exceed 0.014 lb/MMBtu. [P 075-0064]
- ix. The TSP/PM₁₀ emissions when firing ULSD fuel oil in the turbine and natural gas in the duct burner shall not exceed 20.99 lb/hr [P 075-0064]
- The TSP/PM₁₀ emissions when firing ULSD fuel oil in the turbine and natural gas in the duct х. burner shall not exceed 0.035 lb/MMBtu/hr. [P 075-0064]
- The total TSP/PM₁₀ emissions from the turbine the duct burner, and package boiler (EU-3) shall xi. not exceed 92.3 tpy. [P 075-0064]
- xii. The particulate matter standards shall apply at all times, except during periods of startup, shutdown or malfunction. [P 075-0064]
- b. Monitoring and Testing Requirements
 - i. The Permittee shall determine TSP and PM₁₀ emissions daily using the most recent stack test results and/or published emissions factors and heat input from fuel flow measurements. [RCSA §22a-174-33(j)(1)(K)(ii)]
 - ii. Annual TSP and PM₁₀ emissions shall be verified by the Permittee, by adding the current month's TSP emissions to the previous 11 month's emissions. [RCSA §22a-174-33(j)(1)(K)(ii)]
 - If required by the commissioner, the Permittee shall measure TSP emissions using EPA Method 5 iii. stack test. [RCSA §22a-174-5(b)(5)]
 - The Permittee must perform stack emissions testing for PM_{10} every five years, using test methods iv. and procedures approved by the commissioner. Testing must be performed with the gas turbine operating alone and with the duct burner, and for all fuel combinations; except that testing with the duct burner firing ULSD fuel oil is not required if the duct burner has not operated on fuel oil in the last five years. The stack emissions testing must be completed within five years of the previous test. If testing is not performed with the duct burner firing fuel oil, it must be completed within 60 days after the next operation of the duct burner on fuel oil. [P 075-0064; RCSA §22a-174-5(d)]

c. Record Keeping Requirements

- i. The Permittee shall maintain records of monthly and annual actual TSP/PM₁₀ emissions. The monthly TSP/PM₁₀ emissions shall be calculated using emission factors obtained from the latest stack test results, or if unavailable, the manufacturer's guaranteed emissions rates or published emission factors and the fuel usage. [P 075-0064]
- ii. The Permittee shall keep records of the annual TSP/PM_{10} emissions by adding the current month's emissions to the previous 11 months emissions. The Permittee shall make these calculations within 30 days of the end of the previous month and made available for inspection by this Bureau upon request. [P 075-0064]

d. Reporting Requirements

- i. The Permittee shall, on a daily basis review data recorded and calculated for that day and report to the commissioner within three working days any exceedances of an emission limit. [P 075-0064]
- ii. The Permittee shall submit to the commissioner and the Administrator a notification of any physical or operational change to the turbine and/or the duct burner which may increase the emission rate of particulate, unless that change is specifically exempted under an applicable subpart or in 40 CFR §60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The commissioner and the Administrator may request additional relevant information subsequent to this notice. [40 CFR§60.7(a)(4)]
- iii. 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. VOC/HC

a. Limitation or Restriction

- i. The HC emissions when firing natural gas in the turbine or in the turbine and duct burner shall not exceed 0.035 lb/MMBtu. [P 075-0064]
- ii. The HC emissions when firing natural gas in the turbine and ULSD fuel oil in the duct burner shall not exceed 0.030 lb/MMBtu. [P075-0064]
- iii. The HC emissions when firing ULSD fuel oil in the turbine or in the turbine and duct burner shall not exceed 0.035 lb/MMBtu. [P 075-0064]
- iv. The HC emissions when firing natural gas in turbine shall not exceed 19.19 lb/hr. [P 075-0064]
- v. The HC emissions when firing natural gas in the turbine and duct burner shall not exceed 21.7 lb/hr. [P 075-0064]
- vi. The HC emissions when firing ULSD fuel oil in turbine shall not exceed 18.2 lb/hr. [P 075-0064]
- vii. The HC emissions when firing ULSD fuel oil in the turbine and duct burner shall not exceed 20.80 lb/hr. [P 075-0064]

- viii. The HC emissions when firing natural gas in the turbine and ULSD fuel oil in the duct burner shall not exceed 21.79 lb/hr [P 075-0064]
- ix. The HC emissions when firing ULSD fuel oil in the turbine and natural gas in the duct burner shall not exceed 20.71 lb/hr [P 075-0064]
- x. The HC emissions when firing ULSD fuel oil in the turbine and natural gas in the duct burner shall not exceed 0.035 lb/MMBtu. [P 075-0064]
- xi. The total VOC emissions from the turbine the duct burner, and package boiler (EU-3) shall not exceed 93.70 tpy. [P 075-0064]
- xii. For startup and shutdown periods, the applicable emissions limit for HC shall be enforceable only on a lb/hr basis. The HC lb/MMBtu emission limits do not apply during startup and shut down periods. [P 075-0064]

b. Monitoring and Testing Requirements

- i. The Permittee shall determine HC emissions daily using the most recent stack test results and/or published emissions factors and the heat input from fuel flow measurements. [RCSA §22a-174-33(j)(1)(K)(ii)]
- ii. Annual VOC emissions shall be verified by the Permittee, by adding the current month's VOC emissions to the previous 11 month's emissions. [RCSA §22a-174-33(j)(1)(K)(ii)]
- iii. If required by the commissioner, the Permittee shall measure HC emissions using EPA Method 25 stack test. [RCSA §22a-174-5(f)]

c. Record Keeping Requirements

- i. The Permittee shall maintain records of monthly and annual actual VOC emissions. The monthly VOC emissions shall be calculated using emission factors obtained from the latest stack test results, or if unavailable, the manufacturer's guaranteed emissions rates or published emission factors and the fuel usage. [P 075-0064]
- ii. The Permittee shall keep records of the annual VOC emissions by adding the current month's emissions to the previous 11 months emissions. The Permittee shall make these calculations within 30 days of the end of the previous month and made available for inspection by this Bureau upon request. [P 075-0064]
- iii. The Permittee shall keep records indicating continual compliance with Section III.A.6 of this Title V permit on site at all times and shall make such records available upon Bureau request for the previous five years. [P 075-0064]

d. Reporting Requirements

- i. On a daily basis, the Permittee shall review data recorded and calculated for that day and report to the commissioner within three working days any exceedances of an emission limit. [P 075-0064]
- 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)]

7. CO

- a. Limitation or Restriction
 - The CO emissions when firing natural gas in the turbine or in the turbine and duct burner shall not exceed 0.112 lb/MMBtu. [P 075-0064]
 - ii. The CO emissions when firing natural gas in the turbine shall not exceed 61.21 lb/hr. [P 075-0064]
 - iii. The CO emissions when firing natural gas in the turbine and duct burner shall not exceed 73.0 lb/hr [P 075-0064]
 - The CO emissions when firing ULSD fuel oil in the turbine or in the turbine and duct burner shall iv. not exceed 0.109 lb/MMBtu. [P 075-0064]
 - v. The CO emissions when firing ULSD fuel oil in the turbine shall not exceed 56.77 lb/hr. [P 075-0064]
 - vi. The CO emissions when firing ULSD fuel oil in the turbine and duct burner shall not exceed 68.80 lb/hr. [P 075-0064]
 - vii. The CO emissions when firing natural gas in the turbine and ULSD fuel oil in the duct burner shall not exceed 70.41 lb/hr. [P 075-0064]
 - viii. The CO emissions when firing natural gas in the turbine and ULSD fuel oil in the duct burner shall not exceed 0.096 lb/MMBtu. [P075-0064]
 - ix. The CO emissions when firing ULSD fuel oil in the turbine and natural gas in the duct burner shall not exceed 71.39 lb/hr [P 075-0064]
 - X. The CO emissions when firing ULSD fuel oil in the turbine and natural gas in the duct burner shall not exceed 0.109 lb/MMBtu. [P075-0064]
 - The total CO emissions from the turbine, the duct burner and package boiler (EU-3) shall not xi. exceed 313.70 tpy. [P 075-0064]
 - For startup and shutdown periods, the applicable emissions limit for CO shall be enforceable only on a lb/hr basis. The CO emissions limits for lb/MMBtu do not apply during startup and shutdown periods. [P 075-0064]

b. Monitoring and Testing Requirements

- i. The Permittee shall determine CO emissions daily using the most recent stack test results and heat input from fuel flow measurements. [RCSA §22a-174-33(j)(1)(K)(ii)]
- Annual CO emissions shall be verified by the Permittee, by adding the current month's CO ii. emissions to the previous 11 month's emissions. [RCSA §22a-174-33(j)(1)(K)(ii)]
- The Permittee must perform stack emissions testing for CO every five years, using test methods iii. and procedures approved by the commissioner. Testing must be performed with the gas turbine operating alone and with the duct burner, and for all fuel combinations; except that testing with the duct burner firing ULSD fuel oil is not required if the duct burner has not operated on fuel oil in the last five years. The stack emissions testing must be completed within five years of the previous

test. If testing is not performed with the duct burner firing fuel oil, it must be completed within 60 days after the next operation of the duct burner on fuel. [P075-0064; RCSA §22a-174-5(d)]

c. Record Keeping Requirements

- i. The Permittee shall maintain records of monthly and annual actual CO emissions. The monthly CO emissions shall be calculated using emission factors obtained from the latest stack test results, or if unavailable, the manufacturer's guaranteed emissions rates or published emission factors and the fuel usage. [P 075-0064]
- The Permittee shall keep records of the annual CO emissions by adding the current month's ii. emissions to the previous 11 month's emissions. The Permittee shall make these calculations within 30 days of the end of the previous month and made available for inspection by this Bureau upon request. [P 075-0064]
- iii. The Permittee shall keep records indicating continual compliance with Section III.A.7 of this Title V permit on site at all times and shall make such records available upon Bureau request for the previous five years. [P 075-0064]

d. Reporting Requirements

- On a daily basis, the Permittee shall review data recorded and calculated for that day and report to the commissioner within three working days any exceedances of an emission limit. [P 075-0064]
- The Permittee shall submit additional information in writing, at the commissioner's request, within ii. 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)]

8. Pb

a. Limitation or Restriction

- i. The Pb emissions when firing ULSD fuel oil in the turbine or in the turbine and the duct burner shall not exceed 0.000028 lb/MMBtu. [P 075-0064]
- The Pb emissions when firing ULSD fuel oil in the turbine or in the turbine and the duct burner ii. shall not exceed 0.02 lb/hr. [P 075-0064]
- iii. The Pb emissions when firing ULSD fuel oil in the turbine and natural gas in the duct burner shall not exceed 0.000028 lb/MMBtu. [P 075-0064]
- The Pb emissions when firing natural gas in the turbine and ULSD fuel oil in the duct burner shall iv. not exceed 0.01 lb/hr. [P 075-0064]
- v. The Pb emissions when firing natural gas in the turbine and ULSD fuel oil in the duct burner shall not exceed 0.00000713 lb/MMBtu. [P 075-0064]
- The Pb emissions when firing ULSD fuel oil in the turbine and natural gas in the duct burner shall vi. not exceed 0.02 lb/hr. [P 075-0064]
- The total Pb emissions from the turbine, the duct burner, and package boiler (EU-3) shall not vii. exceed 0.03 tpy. [P 075-0064]

b. Monitoring and Testing Requirements

- i. The Permittee shall determine Pb emissions daily using the most recent stack test results and the heat input from fuel flow measurements or by mass balance calculations using the lead content of the fuel oil. [RCSA §22a-174-33(j)(1)(K)(ii)]
- ii. Annual Pb emissions shall be verified by the Permittee, by adding the current month's Pb emissions to the previous 11 month's emissions. [RCSA §22a-174-33(j)(1)(K)(ii)]
- iii. The Permittee must perform stack emissions testing for Pb every five years, using test methods and procedures with the gas turbine operating on fuel oil alone and with the duct burner; except that testing with the duct burner firing ULSD fuel oil is not required if the duct burner has not operated on fuel oil in the last five years. The stack emissions testing must be completed within five years of the previous test. If testing is not performed with the duct burner firing fuel oil, it must be completed within 60 days after the next operation of the duct burner on fuel oil.

 [P075-0064; RCSA §22a-174-5(d)]
- iv. If a fuel oil analysis for lead content of the ULSD fuel oil and mass balance calculations are provided to demonstrate compliance with the lead emission limits in Section III.A.8.a of this Title V permit and the Maximum Allowable Stack Concentration in accordance with RCSA §22a-174-29, then recurrent stack emission testing for lead is not required. [P 075-0064]

c. Record Keeping Requirements

- i. The Permittee shall maintain records of monthly and annual actual Pb emissions. The monthly Pb emissions shall be calculated using mass balance calculations, fuel analyses, emission factors obtained from the latest stack test results, or if unavailable, the manufacturer's guaranteed emissions rates or published emission factors and the fuel usage. [P 075-0064]
- ii. The Permittee shall keep records of the annual Pb emissions by adding the current month's emissions to the previous 11 month's emissions. The Permittee shall make these calculations within 30 days of the end of the previous month and made available for inspection by the commissioner upon request. [P 075-0064]
- iii. The Permittee shall keep records of any fuel analysis for lead content performed in lieu of stack emissions testing. [075-0064]
- iv. The Permittee shall keep records indicating continual compliance with Section III.A.8 of this Title V permit on site at all times and shall make such records available upon Bureau request for the previous five years. [P 075-0064]

d. Reporting Requirements

- i. On a daily basis, the Permittee shall review data recorded and calculated for that day and report to the commissioner within three working days any exceedances of an emission limit. [P 075-0064]
- 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)]

9. H₂SO₄

a. Limitation or Restriction

The total H_2SO_4 emissions from the turbine, the duct burner, and package boiler (EU-3) shall not exceed 4.4 tpy. [P 075-0064]

b. Monitoring and Testing Requirements

- i. The Permittee shall verify emissions using the most recent performances test data and daily parametric monitoring and engineering calculations. [RCSA §22a-174-33(j)(1)(K)(ii)]
- ii. Annual H₂SO₄ emissions shall be verified by the Permittee, by adding the current month's H₂SO₄ emissions to the previous 11 month's emissions. [RCSA §22a-17433(j)(1)(K)(ii)]
- iii. If required by the commissioner, the Permittee shall measure H₂SO₄ emissions using EPA Method 8 stack test. [RCSA §22a-17433(j)(1)(K)(ii)]

c. Record Keeping Requirements

- i. The Permittee shall maintain records of monthly and annual actual H₂SO₄ emissions. The monthly H₂SO₄ emissions shall be calculated using emission factors obtained from the latest stack test or form the latest version of AP-42 and the fuel usage. [P 075-0064]
- ii. The Permittee shall keep records of the annual H₂SO₄ emissions by adding the current calendar month's H₂SO₄ to those of the previous 11 months. [P 075-0064]
- iii. The Permittee shall keep records indicating continual compliance with Section III.A.9 of this Title V permit on site at all times and be made available upon Bureau request for the duration of this Title V permit, or for the previous five years, whichever is less. [P 075-0064]

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 $\S 22a-174-33(j)(1)(X)$]

10. Opacity

- a. Limitation or Restriction
 - i. The Permittee shall not cause or allow the opacity to exceed 20% (six minute block average). [P 075-0064]
 - ii. The duct burner is subject to the opacity standard in 40 CFR §60.43b when firing ULSD fuel. [40 CFR §60.43b(f)]
 - iii. The opacity standards apply at all times, except during periods of startup, shutdown or malfunctions. [P 075-0064]
- b. Monitoring and Testing Requirements
 - i. The Permittee shall install, calibrate, maintain, and operate COMS for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system.

 [P 075-0064; 40CFR §60.48b]

ii. The operation and maintenance plan for the opacity monitor(s) pursuant to RCSA §22a-174-4 and RCSA §22a-174-7 shall be in accordance with 40 CFR Part 60, Appendices B and F. [P 075-0064]

c. Record Keeping Requirements

- i. The Permittee shall maintain records of opacity. [P 075-0064; 40 CFR §60.49b(f), applies only to the duct burner when it is burning fuel oil]
- ii. The Permittee shall keep records indicating continual compliance with Section III.A.10 of this Title V permit on site at all times and shall make such records available upon Bureau request for the previous five years. [P 075-0064]

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(1)(10(X))

11. CO_2 and O_2

a. Limitation or Restriction

The Permittee shall install CEMS systems for measuring CO₂ and O₂. [P 075-0064]

- b. Monitoring and Testing Requirements
 - i. The Permittee shall install, calibrate, maintain, and operate CEMS and recording systems for measuring CO₂ discharged to the atmosphere (1 hour block average) and shall record the output of the system. [P 075-0064]
 - ii. CO₂ shall be monitored as a CEM diluent gas and corrected to O₂ using a correction factor based upon the measured relationship between CO₂ and O₂. [P 075-0064]
- c. Record Keeping Requirements

The Permittee shall make and maintain records of the output from the CEMS measuring CO_2 and O_2 . [P 075-0064]

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)(10(X))

12. Startup and Shutdown

- a. Limitation or Restriction
 - i. Startup and shutdown periods are not to exceed 180 minutes each. [P 075-0064]
 - ii. Startup shall defined as that period of time from initiation of combustion firing until the unit reaches steady state operations. [P 075-0064]

- iii. Shutdown shall be defined as that period of time from the initial lowering of turbine output until the point of which the combustion process has stopped. [P 075-0064]
- iv. NOx emission limits for startup and shutdown periods will be evaluated based on the total mass emissions during the event. [P 075-0064]
- v. For startup and shutdown periods the applicable NOx emissions limit shall be 570 lb/event when firing either natural gas or ULSD fuel oil. The NOx ppmvd @ 15% O₂, lb/MMBtu and lb/hr emissions limits in Section III A.2.a of this Title V permit do not apply during startup and shutdown periods. [P 075-0064]
- vi. The particulate matter and opacity standards apply at all times, except during periods of startup, shutdown or malfunctions. [P 075-0064]
- vii. For startup and shutdown periods, the applicable emissions limits for VOC and CO in Sections III.A.6.a and III.A.7.a of this Title V permit respectively shall be enforceable only on a lb/hr basis. The VOC and CO emissions limits for lb/MMBtu in Sections III.A.6.a and III.A.7.a of this Title V permit respectively do not apply during startup and shutdown periods. [P 075-0064]
- viii. The package boiler (EU-3) or the Cleaver Brooks boiler (EU-17) shall be operated only when the in-line duct burner is not operating. The gas turbine and one of the boilers may operate simultaneously, typically during startup or shutdown of the gas turbine, or while performing emissions testing, or during annual RATA on the gas turbine and/or the boilers, as long as the in-line duct burner is not operating. [P 075-0064]

b. Monitoring and Testing Requirements

Record keeping specified in Section III.A.12.c of this Title V permit shall be sufficient to meet other Monitoring and Testing requirements pursuant to RCSA §22a-174-33. [RCSA §22a-17433(j)(1)(K)(ii)]

c. Record Keeping Requirements

- i. The Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. [P 075-0064]
- ii. The Permittee shall keep records indicating continual compliance with Section III.A.12 of this Title V permit on site at all times and shall make such records available upon Bureau request for the previous five years. [P 075-0064]

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)]

13. Federal Acid Rain Permit Requirements

See Section III.G of this Title V Permit.

B. EMISSIONS UNIT 3 (EU-3) - ZURN PACKAGE BOILER

1. Fuel Limitations

- a. Limitation or Restriction
 - i. Fuel Type: Natural Gas (Primary), ULSD Fuel Oil (Back-up) [P 075-0065]
 - ii. The sulfur content of the distillate fuel oil combusted in the package boiler shall not exceed 15 ppm (0.0015%) by weight, except as provide in RCSA §22a-174-19b(c) or 19b(e) in accordance with RCSA §22a-174-19b(d). [RCSA §22a-174-19b(d)]
 - iii. The maximum hourly fuel consumption when firing natural gas shall be 189,126 cf/hr. [P 075-0065]
 - iv. The maximum hourly fuel consumption when firing ULSD fuel oil shall be 1,329.1 gal/hr. [P 075-0065]

b. Monitoring and Testing Requirements

Record keeping specified in Section III.B.1.c of this Title V permit shall be sufficient to meet other Monitoring and Testing Requirements pursuant to RCSA §22a-174-33. [RCSA §22a-174-33(j)(1)(K)(ii)]

- c. Record Keeping Requirements
 - i. The Permittee shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for ULSD fuel oil and natural gas for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month. [P 075-0065]
 - ii. 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. These calculations shall be made on a monthly basis and made available for inspection By the commissioner upon request. [P 075-0065]
 - iii. Each fuel oil shipment for this equipment shall include a shipping receipt from the fuel supplier certifying the type of fuel in the shipment and the weight percent of sulfur in the fuel. [P 075-0065]

d. Reporting Requirements

- i. The Permittee shall review recorded data daily and report to the commissioner within three working days any exceedances of an allowable limit. [RCSA §22a-174-4(d)(1)]
- 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)]

2. NOx

- a. Limitation or Restriction
 - i. The NOx emissions when firing natural gas shall not exceed 37 ppmvd @ 15% O₂ (0.136 lb/MMBtu) or 26.49 lb/hr. [P 075-0065]
 - ii. The NOx emissions when firing No. 2 fuel oil shall not exceed 37 ppmvd @ 15% O₂ (0.142 lb/MMBtu) or 26.62 lb/hr. [P 075-0065]

- iii. The total NOx emissions from the turbine (EU-1), duct burner (EU-2), and package boiler shall not exceed 700 tpy. In addition, the NOx target value for the turbine (EU-1), duct burner (EU-2) and package boiler shall be 642.1 tpy. [P 075-0065]
- iv. The NOx standards shall apply at all times, including periods of startup, shutdown, or malfunction. [P 075-0065]

b. Monitoring and Testing Requirements

- i. The Permittee shall install, calibrate, maintain, operate, and certify a continuous emissions monitor system (CEMS) for measuring NOx discharged to the atmosphere and shall record the output of the system. [P 075-0065]
- ii. The CEMS shall be installed, calibrated, operated and tested in accordance with RCSA §22a-174-4(c) and with the requirements specified in 40 CFR Part 60 Subpart A, Appendix B and Appendix F, as may be amended from time to time. [P 075-0065]
- iii. The performance or quality assurance relative accuracy test audit (RATA) testing of the CEMS shall be conducted in accordance with a testing protocol approved by the commissioner. [RCSA §22a-174-22e(m)(4)]
- iv. The Permittee shall use data recorded by the CEMS and any other records and reports to determine compliance with the NOx emission limits in Sections III.B.2.a of this Title V permit. [P 075-0065]
- v. The CEMS shall be operated and data recorded during all periods of operation of the package boiler except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments. [40 CFR §60.48b(c)]
- vi. The 1-hour average nitrogen oxides emission rates measured by the continuous nitrogen oxides monitor shall be expressed in ng/J or lb/million Btu heat input and shall be used to calculate the average emission rates under 40 CFR §60.44b. The 1-hour averages shall be calculated using the data points required under 40 CFR §60.13(h)(2). [40 CFR §60.48b(d)]
- vii. The averaging times for the emission limitations with the use of the CEMS shall be one hour block. This shall include all periods of operation, including startup, shutdown, and malfunction. Startup, shutdown or malfunction periods shall not exceed 180 minutes. [P 075-0065]
- viii. The NOx emissions shall be controlled with low NOx burners and efficient combustion controls. [P 075-0065]
- ix. Annual emissions shall be verified by adding the current month's emissions to the previous 11 month's emissions. [P 075-0065; RCSA §22a-174-33(j)(1)(K)(ii)]
- x. If required by the commissioner, the Permittee shall measure NOx emissions using EPA Method 7E stack test. [P 075-0065; RCSA §22a-174-5(f)]
- c. Record Keeping Requirements
 - i. The Permittee shall keep records of all tune-ups, repairs, replacement of parts and other maintenance done on the unit. [RCSA §§22a-174-22e(j)(2)(B) & (E)]

- ii. The Permittee shall keep copies of all documents submitted to the commissioner pursuant to RCSA §22a-174-22e. [RCSA §22a-174-22e(j)(2)(F)]
- The Permittee shall keep all charts, electronically stored data, and printed records produced by the iii. NOx continuous emissions monitor. [RCSA §22a-174-22e(j)(2)(D)(iv)]
- The Permittee shall keep records of all performance evaluations, calibration checks and iv. adjustments on CEMS; a record of maintenance procedures; and all data necessary to complete the quarterly reports required by the Department. [RCSA §22a-174-22e(j)(2)(D)]
- Within 60 days of the completion of certification tests conducted on the CEMS, the Permittee shall v. submit a written report of the results of such testing to the commissioner and the Administrator. [RCSA §22a-174-22e(k)(2); 40 CFR §60.49b(b)]
- vi. The Permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this Title V permit recorded in a permanent form suitable for inspection. The file shall be retained for at least five years following the date of such measurements, maintenance, reports, and records, except as follows specified in 40 CFR §60.7(f). [40 CFR §60.7(f); P 075-0065]
- The Permittee shall maintain reports of all monitoring and test data in accordance with RCSA §22a-174-4(d). [RCSA §22a-174-4(d)]
- viii. The Permittee shall keep records on the premises indicating continual compliance with all permit conditions at all times and shall make such records available upon Bureau request for the previous five years. [P 075-0065]

d. Reporting Requirements

- i. The Permittee shall, on a daily basis, review data recorded and calculated for that day and report to the commissioner any exceedances of an emission limit in accordance with RCSA §22a-174-33(p). [RCSA §22a-174-33(p)]
- If there are no excess emissions during the calendar quarter, the Permittee shall submit to the ii. commissioner and the Administrator, a report semiannually stating that no excess emissions occurred during the semiannual reporting period. [40 CFR §60.49b(h)]
- iii. The Permittee shall notify the commissioner in writing at least 30 days prior to conducting any performance or quality assurance RATA testing on the NOx CEMS. [RCSA §22a-174-22e(m)(4)]
- iv. Within 60 days of the completion of certification tests conducted on the CEMS, the Permittee shall submit a written report of the results of such testing to the commissioner and the Administrator. [RCSA §22a-174-22e(k)(2); 40 CFR §60.49b(b)]
- The Permittee shall provide the records to the commissioner within 30 days of receipt of a written v. request from the commissioner or such sooner time as the commissioner may require. [RCSA §22a-174-4(d)(1)]

3. NOx – RCSA §22a-174-22e (Phase 1 & Phase 2 Requirements)

- a. Limitation or Restriction
 - i. The Permittee shall not cause or allow emissions of NOx to exceed the following emission limitations, based on a daily block average for an emission unit with a NOx CEM system: [RCSA §\$22a-174-22e(d)(3)(A) and (C)]

Note: Pursuant to RCSA §22a-174-22e(a)(1)(B), the package boiler is not considered an "affected unit" because the package boiler's maximum heat input capacity is less than 250 MMBtu/hr

- (A) Phase 1 (Beginning June 1, 2018 and ending May 31, 2023)
 - (1) Natural Gas: 0.20 lb/MMBtu
 - (2) ULSD Fuel Oil: 0.20 lb/MMBtu
- (B) Phase 2 (Beginning June 1, 2023 and continuing thereafter)
 - (1) Natural Gas: 0.10 lb/MMBtu
 - (2) ULSD Fuel Oil: 0.15 lb/MMBtu
- ii. The Permittee of an emission unit may cause or allow an emission unit to exceed the applicable emissions limitations specified in Section III.B.3.a.i of this Title V permit, provided the Permittee undertakes one of the following actions: [RCSA §22a-174-22e(d)(1)]
 - (A) Implements an alternative compliance mechanism in accordance with RCSA §22a-174-22e(g);
 - (B) Operates under a case-by-case RACT determination in accordance with RCSA §22a-174-22e(h); or
 - (C) Ceases operation in accordance with RCSA §22a-174-22e(f).
- b. Monitoring and Testing Requirements
 - i. The Permittee shall calibrate, maintain, operate and certify the CEM system to demonstrate compliance with RCSA §22a-174-22e. [RCSA §22a-174-22e(m)(1)]
 - ii. The Permittee shall collect qualified data for all emission unit operating conditions. Data collection shall include periods of startup or shutdown, monitoring system malfunctions, out-of-control periods, while conducting maintenance or repairs, and periods of required monitoring system quality assurance or quality control activities, such as calibration checks and required zero and span adjustments. [RCSA §22a-174-22e(m)(2)]
 - iii. Emissions data used to determine compliance with applicable emissions limitations in Section III.C.3.a of this Title V permit shall not include data collected during the following periods: [RCSA §§22a-174-22e(m)(3)(A) through (D)]
 - (A) When the monitoring system is out-of-control as specified in the facility-specific monitoring plan;
 - (B) While conducting required monitoring system quality assurance or quality control activities, including calibration checks and required zero and span adjustments;

- (C) While conducting maintenance or repairs of the monitoring system to prevent or correct a malfunction; or
- (D) When the emission unit is not operating.
- iv. The Permittee shall notify the commissioner in writing at least 30 days prior to conducting performance or quality assurance testing of any CEM for NOx. Any such testing shall be conducted in accordance with a testing protocol approved by the commissioner. Any CEM for NOx shall be installed, calibrated and operated in accordance with the performance and quality assurance specifications contained in RCSA §22a-174-4 and 40 CFR Part 60, Subpart A, Appendix B and Appendix F. [RCSA §22a-174-22e(m)(4)]

c. Record Keeping Requirements

- i. The Permittee of an emission unit subject to RCSA §22a-174-22e shall make and keep the following records on and after May 1, 2018: [RCSA §22a-174-22e(j)(2)]
 - (A) For each tune-up, for each emission unit, conducted pursuant to RCSA §22a-174-22e(i):
 - (1) The date on which the emission unit is tuned-up; the name, title and affiliation of the person performing the tune-up, and a description of work performed, and
 - (2) The procedures used to inspect and perform adjustments.
 - (B) Copies of all documents submitted to the commissioner pursuant to RCSA §22a-174-22e;
 - (C) The date work performed for repairs, replacement of parts and other maintenance;
 - (D) CEM requirements:
 - (1) Records of all performance evaluations, calibrations checks and adjustments on such monitor,
 - (2) A record of maintenance performed,
 - (3) All data necessary to complete quarterly reports required under RCSA §22a-174-22e(k)(3), and
 - (4) Charts, electronically stored data, and printed records produced by such CEM systems as needed to demonstrate compliance with the requirements of RCSA §22a-174-22e.
- ii. The Permittee shall keep any records or reports required by an order or permit issued by the commissioner pursuant to RCSA §22a-174-22e. [RCSA §22a-174-22e(j)(2)(G)]
- iii. The Permittee shall retain all records and reports produced pursuant to RCSA §22a-174-22e for five years. Such records and reports shall be available for inspection at reasonable hours by the commissioner or the Administrator. Such records shall be retained at the premises where the emission unit is located, unless the commissioner approves in writing the use of another location in Connecticut. [RCSA §22a-174-22e(j)(1)]

d. Reporting Requirements

i. The Permittee shall submit to the commissioner, on forms provided by the commissioner, written quarterly reports of excess emissions and CEM system malfunctions. Such reports shall be submitted to the commissioner on or before January 30, April 30, July 30 and October 30 of each year. The information submitted shall be in accordance with RCSA §22a-174-22e(k)(3).

[RCSA §22a-174-22e(k)(3)]

ii. Upon written notice, the commissioner may require the Permittee to provide hourly CEM data, in a format acceptable to the commissioner, for the three calendar month period identified in such written notice. [RCSA §22a-174-22e(k)(4)]

4. SO₂

- a. Limitation or Restriction
 - i. The SO₂ emissions when firing natural gas shall not exceed 0.00058 lb/MMBtu, or 0.11 lb/hr. [P 075-0065]
 - ii. The SO₂ emissions when firing ULSD shall not exceed 0.306 lb/MMBtu, or 57.4 lb/hr. [P 075-0065]
 - iii. The SO₂ emissions when firing ULSD shall not exceed 60 ppmvd @15% O₂. [P 075-0065]
 - iv. The total SO₂ emissions from the turbine (EU-1), duct burner (EU-2), and package boiler shall not exceed 49.2 tpy. [P 075-0064]
 - v. The SO₂ emission limits shall apply at all times, including periods of startup, shutdown and malfunction. [P 075-0065]

b. Monitoring and Testing Requirements

- i. In lieu of a CEMS for SO₂, the Permittee shall obtain fuel receipts as described in 40 CFR \$60.49b(r) and certify that only very low sulfur oil, as defined in 40 CFR \$60.41b, was combusted during each reporting period. [P 075-0065; 40 CFR \$60.47b(a) & (f)]
- ii. Annual SO₂ emissions shall be verified by the Permittee, by adding the current month's SO₂ emissions to the previous 11 month's emissions. [P 075-0065; RCSA §22a-174-33(j)(1)(K)(ii)]
- iii. If required by the commissioner, the Permittee shall measure SO₂ emissions using EPA Method 6 or 6c stack test. [P 075-0065; RCSA §22a-174-5(f)]
- c. Record Keeping Requirements
 - i. The Permittee shall maintain records of monthly and annual actual SO₂ emissions. The monthly SO₂ emissions shall be calculated using emission factors obtained from the latest stack test or from the latest version of AP-42 and the fuel usage. Annual SO₂ emissions shall be calculated each calendar month by adding the current calendar month's SO₂ emissions to those of the previous 11 months. [RCSA §22a-174-4(d)(1)]
 - ii. The Permittee shall keep records on the premises indicating continual compliance with all permit conditions at all times and shall make such records available upon Bureau request for the previous five years. [P 075-0065]

d. Reporting Requirements

- i. The Permittee shall, on a daily basis, review data recorded and calculated for that day and report to the commissioner any exceedances of an emission limit in accordance with RCSA §22a-174-33(p). [RCSA §22a-174-33(p)]
- ii. Reports shall be submitted to the commissioner certifying that only very low sulfur oil meeting this definition was combusted in the affected facility during the reporting period. [P 075-0065; 40 CFR §60.49b(r)(1)]

iii. The Permittee shall provide records to the commissioner within 30 days of receipt of a written request from the commissioner or such sooner time as the commissioner may require. [RCSA §22a-174-4(d)(1)]

5. TSP/PM_{10}

- a. Limitation or Restriction
 - i. The TSP/PM $_{10}$ emissions when firing natural gas shall not exceed 0.0049 lb/MMBtu or 0.95 lb/hr. [P 075-0065]
 - ii. The TSP/PM $_{10}$ emissions when firing ULSD fuel oil shall not exceed 0.014 lb/MMBtu or 2.66 lb/hr. [P 075-0065]
 - iii. The total TSP/PM $_{10}$ emissions from the turbine (EU-1), duct burner (EU-2), and package boiler shall not exceed 92.3 tpy. [P 075-0065]
 - iv. The Permittee shall not cause or allow the opacity to exceed 20% (six minute block average). [P 075-0065]
 - v. The particulate matter and opacity standards apply at all times, except during periods of startup, shutdown or malfunction. [P 075-0065]
- b. Monitoring and Testing Requirements
 - i. The Permittee shall determine TSP and PM_{10} emissions daily using the most recent stack test results and/or published emission factors and the heat input from fuel flow measurements. [RCSA 22a-174-33(j)(1)(K)(i)]
 - ii. Annual TSP/PM₁₀ emissions shall be verified by the Permittee, by adding the current month's TSP/PM₁₀ emissions to the previous 11 months emissions. [P 075-0065; RCSA §22a-174-33(j)(1)(K)(ii)]
 - iii. If required by the commissioner, the Permittee shall measure TSP/PM₁₀ emissions using EPA Method 5 stack test. [RCSA §22a-174-5(e)(2)]
 - iv. The Permittee shall install, calibrate, maintain, and operate CEMS for measuring the opacity of emissions discharged to the atmosphere and record the output of the system. [P 075-0065]
 - v. The operating and maintenance plan for the opacity monitor(s) pursuant to RCSA §22a-174-4 shall be in accordance with 40 CFR Part 60, Appendices B and F. [P 075-0065]
- c. Record Keeping Requirements
 - i. The Permittee shall maintain records of monthly and annual actual TSP/PM₁₀ emissions. The monthly TSP/PM₁₀ emissions shall be calculated using emission factors obtained from the latest stack test or from the latest version of AP-42 and the fuel usage. Annual TSP/PM₁₀ emissions shall be calculated each calendar month by adding the current calendar month's TSP emissions to those of the previous 11 months. [RCSA §22a-174-4(d)(1)]
 - ii. The Permittee shall keep records on the premises indicating continual compliance with all permit conditions at all times and shall make such records available upon Bureau request for the previous five years. [P 075-0065]

iii. The Permittee shall maintain records of opacity. [P 075-0065]

d. Reporting Requirements

- i. The Permittee shall, on a daily basis, review data recorded and calculated for that day and report to the commissioner any exceedances of an emission limit in accordance with RCSA §22a-174-33(p). [RCSA §22a-174-33(p)]
- ii. The Permittee shall provide records to the commissioner within 30 days of receipt of a written request from the commissioner or such sooner time as the commissioner may require. [RCSA §22a-174-4(d)(1)]

6. VOC/HC

- a. Limitation or Restriction
 - i. The HC emissions when firing natural gas shall not exceed 0.013 lb/MMBtu or 2.53 lb/hr. [P 075-0065]
 - ii. The HC emissions when firing ULSD fuel oil shall not exceed 0.016 lb/MMBtu or 3.0 lb/hr. [P 075-0065]
 - iii. The total VOC emissions from the turbine (EU-1), duct burner (EU-2), and package boiler shall not exceed 93.7 tpy. [P 075-0065]
- b. Monitoring and Testing Requirements
 - i. The Permittee shall determine VOC emissions daily using the most recent stack test results or published emission factors and the heat input from fuel flow measurements. [RCSA §22a-174-33(j)(1)(K)(ii)]
 - ii. Annual VOC emissions shall be verified by the Permittee, by adding the current month's VOC emissions to the previous 11 month's emissions. The Permittee shall make these calculations within 30 days of the end of the previous month and made available for inspection by the commissioner upon request. [P 075-0065; RCSA §22a-174-33(j)(1)(K)(ii)]
 - iii. If required by the commissioner, the Permittee shall measure VOC emissions using EPA Method 25 stack test. [RCSA §22a-174-5(f)]
- c. Record Keeping Requirements
 - i. The Permittee shall maintain records of monthly and annual actual VOC emissions. The monthly VOC emissions shall be calculated using emission factors obtained from the latest stack test or from the latest version of AP-42 and the fuel usage. Annual VOC emissions shall be calculated each calendar month by adding the current calendar month's VOC emissions to those of the previous 11 months. [RCSA §22a-174-4(d)(1)]
 - ii. The Permittee shall keep records on the premises indicating continual compliance with all permit conditions at all times and shall make such records available upon Bureau request for the previous five years. [P 075-0065]

d. Reporting Requirements

- i. The Permittee shall, on a daily basis, review data recorded and calculated for that day and report to the commissioner any exceedances of an emission limit in accordance with RCSA §22a-174-33(p). [RCSA §22a-174-33(p)]
- ii. The Permittee shall provide records to the commissioner within 30 days of receipt of a written request from the commissioner or such sooner time as the commissioner may require. [RCSA §22a-174-4(d)(1)]

7. CO

a. Limitation or Restriction

- i. The CO emissions when firing natural gas shall not exceed 0.039 lb/MMBtu or 7.56 lb/hr. [P 075-0065]
- ii. The CO emissions when firing ULSD fuel oil shall not exceed 0.035 lb/MMBtu or 6.65 lb/hr. [P 075-0065]
- iii. The total CO emissions from the turbine (EU-1), duct burner (EU-2), and package boiler shall not exceed 313.7 tpy. [P 075-0065]

b. Monitoring and Testing Requirements

- i. The Permittee shall determine CO emissions using the most recent stack test results and the heat input from fuel flow measurements. The Permittee shall make these calculations within 30 days of the end of the previous month and made available for inspection by the commissioner upon request. [P 075-0065; RCSA §22a-174-33(j)(1)(K)(ii)]
- ii. Annual CO emissions shall be verified by the Permittee, by adding the current month's CO emissions to the previous 11 month's emissions. [RCSA §22a-174-33(j)(1)(K)(ii)]
- iii. If required by the commissioner, the Permittee shall measure CO emissions using EPA Method 10 stack test. [RCSA §22a-174-5(f)]

c. Record Keeping Requirements

- i. The Permittee shall maintain records of monthly and annual actual CO emissions. The monthly CO emissions shall be calculated using emission factors obtained from the latest stack test or from the latest version of AP-42 and the fuel usage. Annual CO emissions shall be calculated each calendar month by adding the current calendar month's CO emissions to those of the previous 11 months. [RCSA §22a-174-4(d)(1)]
- ii. The Permittee shall keep records on the premises indicating continual compliance with all permit conditions at all times and shall make such records available upon Bureau request by the commissioner for the previous five years. [P 075-0065]

d. Reporting Requirements

i. The Permittee shall, on a daily basis, review data recorded and calculated for that day and report to the commissioner any exceedances of an emission limit in accordance with RCSA §22a-174-33(p). [RCSA §22a-174-33(p)]

ii. The Permittee shall provide records to the commissioner within 30 days of receipt of a written request from the commissioner or such sooner time as the commissioner may require. [RCSA §22a-174-4(d)(1)]

8. Pb

- a. Limitation or Restriction
 - i. The Pb emissions when firing ULSD fuel oil shall not exceed 0.000003 lb/MMBtu or 0.0006 lb/hr. [P 075-0065]
 - ii. The total Pb emissions from the turbine (EU-1), duct burner (EU-2), and package boiler shall not exceed 0.0263 tpy. [P 075-0065]
- b. Monitoring and Testing Requirements
 - The Permittee shall determine emissions daily using the most recent stack test results or published emission factors and the heat input from fuel flow measurements.
 [RCSA §22a-174-33(j)(1)(K)(ii)]
 - ii. Annual Pb emissions shall be verified by the Permittee, by adding the current month's Pb emissions to the previous 11 month's emissions. [P 075-0065; RCSA §22a-174-33(j)(1)(K)(ii)]
 - iii. If required by the commissioner, the Permittee shall measure Pb emissions using EPA Method 12 stack test. [RCSA §22a-174-5(f)]
- c. Record Keeping Requirements
 - i. The Permittee shall maintain records of monthly and annual actual Pb emissions. The monthly Pb emissions shall be calculated using emission factors obtained from the latest stack test or from the latest version of AP-42 and the fuel usage. Annual Pb emissions shall be calculated each calendar month by adding the current calendar month's Pb emissions to those of the previous 11 months. [RCSA §22a-174-4(d)(1)]
 - ii. The Permittee shall keep records on the premises indicating continual compliance with all permit conditions at all times and shall make such records available upon Bureau request by the commissioner for the previous five years. [P 075-0065]
- d. Reporting Requirements
 - i. The Permittee shall, on a daily basis, review data recorded and calculated for that day and report to the commissioner any exceedances of an emission limit in accordance with RCSA §22a-174-33(p). [RCSA §22a-174-33(p)]
 - ii. The Permittee shall provide records to the commissioner within 30 days of receipt of a written request from the commissioner or such sooner time as the commissioner may require. [RCSA §22a-174-4(d)(1)]

9. H₂SO₄

- a. Limitation or Restriction
 - i. The H_2SO_4 emissions when firing natural gas shall not exceed 0.0000081 lb/MMBtu or 0.001 lb/hr. [P 075-0065]

- ii. The H_2SO_4 emissions when firing ULSD fuel oil shall not exceed 1.0 ppmvd @ 15% O_2 (0.0052 lb/MMBtu) or 0.98 lb/hr. [P 075-0065]
- iii. The total H₂SO₄ emissions from the turbine, the duct burner, and package boiler shall not exceed 4.4 tpy. [P 075-0064]

b. Monitoring and Testing Requirements

- i. The Permittee shall determine H₂SO₄ emissions daily using the most recent stack test results or published emission factors and the heat input from fuel measurements. [RCSA §22a-174-33(j)(1)(K)(ii)]
- ii. Annual H₂SO₄ emissions shall be verified by the Permittee, by adding the current month's H₂SO₄ emissions to the previous 11 month's emissions. The Permittee shall make these calculations within 30 days of the end of the previous month and made available for inspection by the commissioner upon request. [P 075-0065; RCSA §22a-174-33(j)(1)(K)(ii)]
- iii. If required by the commissioner, the Permittee shall measure H₂SO₄ emissions using EPA Method 8 stack test. [RCSA §22a-174-5(f)]

c. Record Keeping Requirements

- i. The Permittee shall maintain records of monthly and annual actual H₂SO₄ emissions. The monthly H₂SO₄ emissions shall be calculated using emission factors obtained from the latest stack test results, or if unavailable the manufacturer's guaranteed emissions rates or published emission factors and the fuel usage. Annual H₂SO₄ emissions shall be calculated each calendar month by adding the current calendar month's H₂SO₄ emissions to those of the previous 11 months. [RCSA §22a-174-4(d)(1)]
- ii. The Permittee shall keep records on the premises indicating continual compliance with all permit conditions at all times and shall make such records available upon Bureau request for the previous five years. [P 075-0065]

d. Reporting Requirements

- i. The Permittee shall review, on a daily basis, review data recorded and calculated for that day and report to the commissioner any exceedances of an emission limit in accordance with RCSA §22a-174-33(p). [RCSA §22a-174-33(p)]
- ii. The Permittee shall provide records to the commissioner within 30 days of receipt of a written request from the commissioner or such sooner time as the commissioner may require. [RCSA §22a-174-4(d)(1)]

10. Operating Requirements

a. Limitation or Restriction

- i. The Zurn package boiler shall be operated only when the in-line duct burner (EU-2) is not operating. The gas turbine (EU-1) and the package boiler may operate simultaneously, typically during startup or shutdown of the gas turbine, or while performing emissions testing, or during annual Relative Accuracy Test Audits (RATA) on the gas turbine (EU-1) and/or the package boiler, as long as the in-line duct burner is not operating. [P 075-0065]
- ii. The Zurn package boiler shall not be operated when the Cleaver-Brooks package Boiler (EU-17) is operating except during transitional periods or testing purposes. [P 075-0065]

- iii. During any air pollution emergency episode that occurs, the boiler shall be operated in accordance with the Updated Facility Emergency Episode plans submitted to the commissioner, pursuant to RCSA §22a-174-6. [P 075-0065]
- iv. CO₂ shall be monitored as a CEM diluent gas and corrected to O₂ using a Department approved correction factor based upon the measured relationship between CO₂ and O₂. [P 075-0065]
- v. The CEMS shall be capable of calculating emission concentrations corrected to 15% O_2 at ISO standard conditions, [P 075-0065]

b. Monitoring and Testing Requirements

- i. The CEMS sampling probes shall be located in the stack breaching of the package boiler. [P 075-0065]
- ii. The performance or quality assurance testing of the CEMS shall be conducted in accordance with a testing protocol approved by the commissioner. [P 075-0065]
- iii. All emissions testing at the premises must have prior approval of the Department and must follow all Department approved methods and procedures. [P 075-0065]

c. Record Keeping Requirements

The Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. [P 075-0065]

d. Reporting Requirements

- i. The facility shall submit, at least 60 days prior to the commencement of the CEM performance testing, the CEM Plan and the CEM summary Plan. [P 075-0065]
- ii. The Permittee shall submit to the commissioner and the Administrator a notification of any physical or operational change to the package boiler which may increase the emission rate of NOx, SO_x, or Particulate, unless that change is specifically exempted under an applicable subpart or in 40 CFR §60.14 (e). [P 075-0065]
- iii. The Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction; any malfunction of the sir pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. [P 075-0065]
- iv. 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-17433(j)(1)(X)]

C. EMISSIONS UNIT 4 (EU-4) - DETROIT DIESEL STARTER ENGINE

1. Fuel and Operating Hour Limitations

- a. Limitation or Restriction
 - i. Fuel Type: ULSD Fuel Oil [P 075-0150]
 - ii. Maximum Fuel Sulfur Content: 0.0015% (by weight, dry basis) [P 075-0150]

- iii. Maximum Fuel Firing Rate (gal/hr): 41.5 [P 075-0150]
- iv. Maximum Daily Fuel Usage (gal/day): 161 [P 075-0150]
- v. Maximum Allowable Fuel Consumption in any One Hour Period (gal): 25 [P 075-0150]
- vi. Maximum Fuel Consumption over Any Consecutive 12 Month Period (gal): 4,150 [P 075-0150]
- vii. Maximum Operating Hours Over Any Consecutive 12 Month Period: 500 [P 075-0150]
- viii. The Permittee shall not operate EU-4 continuously for more than six hours. [P 075-0150]

b. Monitoring and Testing Requirements

The Permittee shall install and operate equipment capable of continuously monitoring and recording fuel consumption from this unit. Such equipment shall include a non-resettable, totalizing fuel meter and shall continuously monitor fuel consumed by this emission unit. [P 075-0150]

c. Record Keeping Requirements

- i. The Permittee shall record hourly and daily fuel consumption. [P 075-0150]
- ii. By the close of each day of operation, the Permittee shall record the type and actual quantity of fuel, in units of volume per day or MMBtu per day, used by the starter engine on the preceding day. [Order No. 8373]
- iii. The Permittee shall keep records of the 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 and records within 30 days of the end of the previous month. [P 075-0150]
- iv. 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 this equipment that includes the applicable sulfur content and British Thermal Units (BTUs) 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, and the method used to determine the sulfur and BTU content of such fuel. In lieu-of a fuel supplier certification and shipping receipt or contract, the Permittee may determine the sulfur and or BTU content by sampling and analyzing the fuel oil from a delivery. [P 075-0150]
- v. The Permittee shall make and keep records of daily, monthly and consecutive 12 month operating hours of the starter engine. [P 075-0150]

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. Work Practices and Maintenance

- a. Limitation or Restriction
 - i. The Permittee shall only operate and maintain this equipment in conjunction with the General Electric gas turbine, Model No. PG6531. These situations are defined as: [P 075-0150]

- (A) Startup of turbine. The engine is run at low speed for approximately five minutes to warm up the engine. The engine is then ramped up to full speed over the period of five minutes, then held at maximum speed for an additional five minutes. This allows the turbine to reach self-sustaining speed, at which point the startup engine is shut off. Total operation time is approximately 20 to 30 minutes per startup.
- (B) Cool down of turbine blades. During the shutdown process, the engine is used to rotate the turbine blades without combustion occurring in the turbine. This operation lasts approximately two hours.
- (C) Washing of turbine blades. The engine, operating at low speed, rotates the blades while a cleaning solution is sprayed onto the blades. This operation usually lasts about an hour and a half.
- (D) Engine testing. If the engine appears to be malfunctioning during any of the above operations, the engine may be tested for a short period (about two minutes) to check for irregularities.
- ii. The Permittee shall comply with the following requirements from Table 2d (Item 4) to 40 CFR Part 63 Subpart ZZZZ [40 CFR §63.6603(a)]
 - (A) Change oil and filter every 500 hours of operation or annually, whichever comes first;
 - (B) Inspect air cleaner every 1, 000 hours of operation or annually, whichever comes first, and replace as necessary; and
 - (C) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
- iii. The Permittee has the option to utilize an oil analysis program as described in 40 CFR §63.6625(i) in order to extend the specified oil change requirement as required by Section III.C.2.a.ii.A of this Title V permit. [40 CFR Part 63 Subpart ZZZZ]

b. Monitoring and Testing Requirements

- i. The Permittee shall operate and maintain this equipment in accordance with the manufacturer's specifications and written recommendations. [P 075-0150]
- ii. The Permittee shall continuously comply with the work or management practices by the following: [Table 6 (Item 9) to 40 CFR Part 63 Subpart ZZZZ, 40 CFR §63.6640(a)]
 - (A) Operate and maintain the unit according to the manufacturer's emission-related operation and maintenance instructions; or
 - (B) Develop and follow a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

c. Record Keeping Requirements

i. If the oil analysis program as specified in Section III.C.2.a.iii of this Title V permit is utilized, the Permittee shall keep records of the parameters that are analyzed as part of the program, the results

of the analysis, and the oil changes for the engine. Additionally, the analysis program must be part of the maintenance plan for the starter engine. [40 CFR §63.6625(i)]

- ii. The Permittee shall keep records of the maintenance conducted on the unit in order to demonstrate that Permittee operated and maintained the unit according to the maintenance plan.

 [40 CFR §63.6655(e)]
- iii. The Permittee shall keep all other required records as specified in 40 CFR §63.6655. [40 CFR Part 63 Subpart ZZZZ]
- iv. The Permittee shall keep all records required by this Title V permit for a period of no less than five years and shall submit such records to the commissioner upon request. [P 075-0150]

d. Reporting Requirements

- i. The Permittee shall report each instance in which it did not meet the requirements in Section III.C.2.a.ii of this Title V permit. These deviations must be reported according to the requirements specified in 40 CFR §63.6650. [40 CFR §63.6640(b)]
- ii. The Permittee shall report each instance it did not meet the applicable requirements in Table 8 of 40 CFR Part 63 Subpart ZZZZ. [40 CFR §63.6640(e)]
- iii. The Permittee shall submit additional in writing, at the commissioner's request, within 30 days 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. NOx

a. Limitation or Restriction

The NOx emissions shall not exceed the following:

- i. 0.89 tpy [P 075-0150]
- ii. 8.0 gm/bk hp-hr. The Permittee may use NOx DERCs to comply with this limit as stated in Order No. 8373, issued in accordance with RCSA §§22a-174-22e(g)(1) and 22e(g)(6)(C). [P 075-0150; RCSA §§22a-174-22e(d)(6) and (g)(1)]
- iii. 17.76 lb/hr. This limit shall be for the total pounds of NOx emissions in any one hour period and not an instantaneous mass emission rate. [P 075-0150]
- iv. 5.00 lb/MMBtu [P 075-0150]
- b. Monitoring and Testing Requirements
 - i. The Permittee shall conduct an emission test to demonstrate compliance with RCSA §22a-174-22e emissions limit. Such emission test shall be conducted in accordance with RCSA §22a-174-22e(l)(6). Compliance with the NOx emission limitation shall be determined based on four 15-minute test runs to be conducted under normal startup engine operating conditions for the startup of the General Electric gas turbine as an alternative to 90% of maximum fuel consumption rate pursuant to RCSA §22a-174-22e(l)(7). Each test run shall consist of the following sequence of operating phases: Startup>warmup (idle)>accelerate>high speed>cooldown (idle). [P 075-0150, RCSA §22a-174-22e(l)].

- ii. The Permittee shall conduct recurrent stack testing within five years from the date of the previous stack test or when it is due, whichever is sooner. [P 075-0150]
- iii. The Permittee shall demonstrate compliance with emission limitations of RCSA §22a-174-22e using sampling and analytical procedures approved under 40 CFR 60, Appendix A, or under procedures in RCSA §22a-174-5(d). Sampling shall be conducted under normal startup engine operating conditions for the startup of the General electric Gas Turbine as an alternative to 90% of maximum capacity per RCSA §22a-174-22e(l)(7)(A). Each test run shall consist of the following sequence of operating phases: Startup > warmup (idle) > accelerate > high speed > cooldown (idle). [P 075-0150; RCSA §22a-174-22e(l)(7)]
- iv. Not more than one year from the issuance of Order No. 8373, the Permittee shall perform maintenance and inspection of the starter engine. Such maintenance and inspection shall include, but not be limited to inspection and tune up at least once per calendar year, beginning with 2018 in accordance with RCSA §22a-174-22e(i). [RCSA §22a-174-22e; Order No. 8373]

c. Record Keeping Requirements

- The Permittee shall calculate and record the monthly and consecutive 12 month NOx 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. [P 075-0150]
- ii. The Permittee shall keep the following records for the starter engine:
 - (A) The date and work performed for repairs, replacement of parts and other maintenance; [RCSA §22a-174-22e(j)(2)(B)]
 - (B) For each tune-up conducted on the starter engine pursuant to RCSA §22a-174-22e(i); [RCSA §22a-174-22e(j)(2)(E)]
 - (1) The date on which the emission unit is tuned-up; the name, title and affiliation of the person performing the tune-up, and a description of work performed, and
 - (2) The procedures used to inspect and perform adjustments.
 - (C) Copies of all documents submitted to the commissioner pursuant to RCSA §22a-174-22e; [RCSA §22a-174-22e(j)(2)(F)]
 - (D) Any other records or reports required by an order or permit issued by the commissioner pursuant to RCSA §22a-174-22e. [RCSA §22a-174-22e(j)(2)(G)]
- iii. The Permittee shall retain all records and reports for five years. Such records and reports shall be available for inspection at reasonable hours by the commissioner or the Administrator. Such records and reports shall be retained at the source, unless the commissioner approves in writing the use of another location in the State. [RCSA §22a-174-22e(j)(1); P 075-0150]
- iv. 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. [Order No. 8373]
- v. On or before the first day of each calendar month, the Permittee shall record the number of DERCS and corresponding serial numbers, vintages, purchase/sale dates, and seller/buyer for all DERCS purchased or sold during the preceding calendar month. [Order No. 8373]

- vi. 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 Section III.C.3.e.vi(A) of this Title V permit. [Order No. 8373]
- vii. 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 Section III.C.3.e.vi.(B) of this Title V permit. [Order No. 8373]
- viii. On or before January 31 of each calendar year, the Permittee shall record the quantity of DERCS deducted in accordance with Sections III.C.3.e.vii of this Title V permit. Such records shall include the serial number and vintage of each DERC deducted from the Permittee's current balance pursuant to Section III.C.3.e.vii of this Title V permit. [Order No. 8373]
- 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 Section III.C.3.e.vii of this Title V permit were created during an ozone season. Generator certification of this fact shall be sufficient. [Order No. 8373]

d. Reporting Requirements

- i. The Permittee shall submit a report on NOx emissions from such source, in the annual Emission Statement. [RCSA §22a-174-4(d)(1)]
- 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 Sections III.C.3.c.iv ix of this Title V permit. 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. [Order No. 8373]
- iii. 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)]

e. Operating Requirements

- i. Pursuant to RCSA §22a-174-22e(g)(6)(C), the Permittee shall comply with RCSA §22a-174-22e(d), when operating the starter engine by means of emissions trading in accordance with the provisions of Order No. 8373. [Order No. 8373]
- ii. The Permittee shall use the full load emission rate (FLER) identified in Table 2 of Order No. 8373, and Table III.C.3 of this Title V permit, for the purpose of calculating DERCS required for the starter engine. [Order No. 8373]
- iii. The Permittee shall obtain and use sufficient DERCS in such a manner as to comply with Sections III.C.3.e.vii and viii of this Title V permit. All DERCs used during the Ozone Season for the starter engine shall have been generated during an ozone season. [Order No. 8373]
- iv. For the purposes of compliance with RCSA §22a-174-22e(g)(6)(C) and the provisions of Order No. 8373, 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 in compliance with the provisions of RCSA §22a-174-22e(g)(6)(C) and Order No. 8373. [Order No. 8373].

- The Permittee shall not cause or allow actual NOx emissions from the operation of the starter v. engine to exceed the FLER. Compliance with the FLER shall be determined based on the results of emissions testing performed in accordance with RCSA §22a-174-22e(1). [Order No. 8373]
- DERC USE: On the first day of each calendar month, the Permittee shall possess a quantity of vi. DERCS that equals, or exceeds the quantity of actual DERCS required in that month. Compliance with this section shall be determined as follows: [Order No. 8373]
 - Before the first day of each month, the Permittee shall estimate the DERC required for that calendar month using the FLER and AEL as stated in Table 2 of Order No. 8373 and included in Table III.C.3 of this Title V permit as follows:

Estimated DERCS required = $\{(Capacity \times Estimated Hours of Operation) \times ((FLER) - C$ $(0.95 \times AEL))$ } + 9.08×10^5 grams/ton

Where:

- AEL = Allowable Emission Limit, As Defined in Order No. 8373 and in this Title V permit.
- FLER = Full Load Emission Rate, As Defined In Order No. 8373 and in this Title V
- Discount(0.95) = 5% Design Margin Applied to the AEL
- No later than the twentieth day of each month, the Permittee shall calculate actual DERCS used in the preceding calendar month for the starter engine using the FLER and AEL as follows:
 - Actual DERCS required = $\{(Capacity \ x \ Actual \ Hours \ of \ Operation \ x \ ((FLER) (0.95 \ X)\}$ AEL))} + 9.08 X 10⁵ grams/ton
- (C) Total Actual DERCs Required = Actual DERCs Required (Table 2) + Actual DERCs required (Table 1) calculated pursuant to Section III.A.2.e.ix.B of this Title V permit.
- 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 Section III.C.3.e.vi(C) of this Title V permit for the preceding calendar year, rounded up to the nearest whole ton. [Order No. 8373]
- viii. FLER VIOLATION. Violation of the 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 proposed by the commissioner shall be used. Notwithstanding this requirement, exceedance of the FLER contained in Table 2 of Order No. 8373, and in Table III.C.3 of this Title V permit, is a violation of Section III.C.3.e.v of this Title V permit subject to enforcement action in accordance with Department of Energy & Environmental Protection's enforcement response policy, in effect at the time of such violation. [Order No. 8373]

| Table III.C.3; CDECCA STARTER ENGINE – NOx EMISSION RATE, FLER AND | | | | | | |
|--|--------|----------------|------------|-------|-----|--|
| ALLOWABLE LIMITS | | | | | | |
| (AEL), (gm/bhp-hr) | | | | | | |
| Emission Unit | Fuel | Capacity (bhp) | 2/13/2017 | | | |
| Permit No. | | | Stack Test | FLER | AEL | |
| 075-0150 | | | Rate | | | |
| DETROIT | | | | | | |
| STARTER | DIESEL | 700 | 9.92 | 16.47 | 8.0 | |
| DIESEL | | | | | | |

4. NOx – RCSA §22a-174-22e (Phase 1 & Phase 2 Requirements)

- a. Limitation or Restriction
 - i. Prior to June 1, 2023, unless allowed in accordance with Order No. 8373, the Permittee shall not cause or allow emissions of NOx as determined by NOx emission testing pursuant to RCSA §22a-174-22e(l) for the starter engine to exceed the following:

 [RCSA §22a-174-22e(d)(6)(A)]
 - (A) Phase 1 (Beginning June 1, 2018 and ending May 31, 2023)

ULSD: 8.0 g/bk hp-hr

- ii. On or after June 1, 2023 the Permittee shall not cause or allow emissions of NOx as determined by NOx emission testing pursuant to RCSA §22a-174-22e(l) for the starter engine to exceed the following: [RCSA §22a-174-22e(d)(6)(B)]
 - (A) Phase 2

ULSD: 2.3 g/bk hp-hr

- iii. The Permittee of an emission unit may cause or allow an emission unit to exceed the applicable emissions limitations specified in Sections III.C.4.a.i and ii of this Title V permit, provided the Permittee undertakes one of the following actions: [RCSA §§22a-174-22e(d)(1)(A), (B) and (C)]
 - (A) Implements an alternative compliance mechanism in accordance with RCSA §22a-174-22e(g);
 - (B) Operates under a case-by-case RACT determination in accordance with RCSA §22a-174-22e(h);
 - (C) Ceases operation in accordance with RCSA §22a-174-22e(f).
- b. Monitoring and Testing Requirements
 - i. The Permittee shall conduct an initial emissions test on a date during Phase 1 that is no more than 63 calendar months following the date of the last emission test performed pursuant to former section RCSA §22a-174-22(k). [RCSA §22a-174-22e(l)(4)]
 - ii. The Permittee shall conduct an emissions test on a date after May 31, 2023 and no later than June 1, 2025. [RCSA §22a-174-22e(l)(5)]
- c. Record Keeping Requirements

The Permittee shall make and keep records of the dates, times, and places of all emission testing required by RCSA §22a-174-22e, 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

Not more than 60 days after the completion of emission tests conducted in accordance with RCSA §22a-174-22e(l) the Permittee shall submit a written report of the results of such testing to the commissioner. [RCSA§22a-174-22e(k)(1)]

5. SO_x

a. Limitation or Restriction

The SOx emissions shall not exceed the following: [P-075-0150]

- i. 0.01 lb/hr
- ii. 0.31 lb/MMBtu
- iii. 5E-04 tpy

b. Monitoring and Testing Requirements

Record keeping specified in Section III.C.5.c of this Title V permit shall be sufficient to meet other Monitoring and Testing requirements pursuant to RCSA §22a-174-33. [RCSA §22a-174-33(j)(1)(K)(ii)]

c. Record Keeping Requirements

The Permittee shall calculate and record the monthly and consecutive 12 month SO_2 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. 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. $[P\ 075-0150]$

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. PM, PM_{10} , and $PM_{2.5}$

- a. Limitation or Restriction
 - i. The PM emissions shall not exceed 0.58 lb/hr [P 075-0150]
 - ii. The PM emissions shall not exceed 0.1 lb/MMBtu [P 075-0150]
 - iii. The PM emissions shall not exceed 0.029 tpy [P 075-0150]
 - iv. The PM₁₀ and PM_{2.5} emissions shall not exceed 0.33 lb/hr [P 075-0150]
 - v. The PM₁₀ and PM_{2.5} emissions shall not exceed 0.06 lb/MMBtu [P 075-0150]
 - vi. The PM₁₀ and PM_{2.5} emissions shall not exceed 0.017 tpy. [P 075-0150]
 - vii. This equipment shall not exceed 10 % opacity during any six minute block average as measured by 40 CFR Part 60, Appendix A, reference Method 9. [P 075-0150]

b. Monitoring and Testing Requirements

Record keeping specified in Section III.C.6.c of this Title V permit shall be sufficient to meet other Monitoring and Testing requirements pursuant to RCSA §22a-174-33. [RCSA §22a-174-33(j)(1)(K)(ii)]

c. Record Keeping Requirements

The Permittee shall calculate and record the monthly and consecutive 12 month PM, PM_{10} , and $PM_{2.5}$ 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. 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. [P 075-0150]

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. VOC

- a. Limitation or Restriction
 - i. The VOC emissions shall not exceed 0.52 lb/hr [P 075-0150]
 - ii. The VOC emissions shall not exceed 0.09 lb/MMBtu [P 075-0150]
 - iii. The VOC emissions shall not exceed 0.026 tpy [P 075-0150]

b. Monitoring and Testing Requirements

Record keeping specified in Section III.C.7.c of this Title V permit shall be sufficient to meet other Monitoring and Testing requirements pursuant to RCSA §22a-174-33. [RCSA §22a-174-33(j)(1)(K)(ii)]

c. Record Keeping Requirements

The Permittee shall calculate and record the monthly and consecutive 12 month VOC 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. 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. [P 075-0150]

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)]

8. CO

- a. Limitation or Restriction
 - i. The CO emissions shall not exceed 4.94 lb/hr [P 075-0150]
 - ii. The CO emissions shall not exceed 0.85 lb/MMBtu [P 075-0150]
 - iii. The CO emissions shall not exceed 0.247 tpy. [P 075-0150]

b. Monitoring and Testing Requirements

Record keeping specified in Section III.C.8.c of this Title V permit shall be sufficient to meet other Monitoring and Testing requirements pursuant to RCSA §22a-174-33. [RCSA §22a-174-33(j)(1)(K)(ii)]

c. Record Keeping Requirements

The Permittee shall calculate and record the monthly and consecutive 12 month CO 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. 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. [P 075-0150]

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)]

D. EMISSIONS UNIT 10 (EU-10) - DIESEL POWERED BOILER FEED WATER PUMP ENGINE

1. Hours of Operation

- a. Limitation or Restriction
 - i. The Permittee shall operate the EU-10 according to the following requirements. If the Permittee does not operate the engine in accordance with the following requirements, the engine will not be considered an emergency engine under 40 CFR Part 60 Subpart ZZZZ and must meet all of the requirements for non-emergency engines. [40 CFR §63.6640(f)]:
 - (A) There is no time limit on the use of the engine in emergency situations.
 - (B) The Permittee may operate the unit for a maximum of 100 hours per calendar year for the reason listed in Section III.D.1.a.i(B)(1) of this Title V permit. Any operation for non-emergency situations as allowed by Section III.D.1.a.i(C) of this Title V permit is included as part of the 100 hours allowed by this paragraph.
 - (1) Each emergency engine may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of the emergency engine beyond 100 hours per calendar year. [40 CFR §63.6640(f)(2)(i)]
 - (C) The unit may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to

generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 CFR §63.6640(f)(4)]

ii. During periods of startup, the Permittee shall minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR §63.6625(h)]

b. Monitoring and Testing Requirements

The Permittee shall install a non-resettable hour meter if one is not already installed. [40 CFR §63.6625(f)]

c. Record Keeping Requirements

- i. The Permittee shall keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The Permittee shall document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. [40 CFR §63.6655(f)]
- ii. The Permittee shall keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes. [40 CFR §63.6655(f)]

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. Work Practices and Maintenance

- a. Limitation or Restriction
 - i. The Permittee shall comply with the following requirements from Table 2d (Item 4) to 40 CFR Part 63 Subpart ZZZZ [40 CFR §63.6603(a)]
 - (A) Change oil and filter every 500 hours of operation or annually, whichever comes first;
 - (B) Inspect air cleaner every 1, 000 hours of operation or annually, whichever comes first, and replace as necessary; and
 - (C) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
 - ii. The Permittee has the option to utilize an oil analysis program as described in 40 CFR §63.6625(i) in order to extend the specified oil change requirement as required by Section III.D.2.a.i(A) of this Title V permit. [40 CFR Part 63 Subpart ZZZZ]

b. Monitoring and Testing Requirements

i. The Permittee shall continuously comply with the work or management practices by the following: [Table 6 (Item 9) to 40 CFR Part 63 Subpart ZZZZ, 40 CFR §63.6640(a)]

- (A) Operate and maintain the unit according to the manufacturer's emission-related operation and maintenance instructions; or
- (B) Develop and follow a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

c. Record Keeping Requirements

- i. If the oil analysis program as specified in Section III.D.2.a.ii of this Title V permit is utilized, The Permittee shall keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. Additionally, the analysis program must be part of the maintenance plan for the engine. [40 CFR §63.6625(i)]
- ii. The Permittee shall keep records of the maintenance conducted on the unit in order to demonstrate that Permittee operated and maintained the unit according to the maintenance plan.

 [40 CFR §63.6655(e)]
- iii. The Permittee shall keep all other required records as specified in 40 CFR §63.6655. [40 CFR Part 63 Subpart ZZZZ]

d. Reporting Requirements

- i. The Permittee shall report each instance in which it did not meet the requirements in Section III.D.2.a.i of this Title V permit. These must be reported according to the requirements specified in 40 CFR §63.6650. [40 CFR §63.6640(b)]
- ii. The Permittee shall report each instance it did not meet the applicable requirements in Table 8 of 40 CFR Part 63 Subpart ZZZZ. [40 CFR §63.6640(e)]

E. EMISSIONS UNIT 17 (EU-17) - CLEAVER-BROOKS PACKAGE BOILER

1. Fuel Consumption

- a. Limitation or Restriction
 - i. The natural gas usage shall not exceed 214 million cubic feet in any 12 month rolling aggregate and the No. 2 fuel oil usage shall not exceed 704,000 gallons in any 12 month rolling aggregate. [RCSA §§22a-174-3b(c)(1)(B)(i) and -3b(c)(1)(B)(iii)]
 - ii. The maximum rated heat input shall not exceed 50 MMBtu/hr when burning natural gas and 25 MMBtu/hr when burning ULSD or No. 2 fuel oil. [RCSA §22a-174-3b(c)(1)(A)]

b. Monitoring and Testing Requirements

- i. The Permittee shall properly maintain and operate the unit in accordance with the limitation or restriction requirements in Section III.E.1.a of this Title V permit. [RCSA §22a-174-3b(c)(1)]
- ii. The Permittee shall perform a tune-up of the units on an annual basis. [RCSA 22a-174-3b(c)(1)(E); RCSA 22a-174-22e(i)]

c. Record Keeping Requirements

i. The Permittee shall make and maintain records of the fuel type and quantity used, in million cubic feet, for each month and each 12 month rolling aggregate. [RCSA §22a-174-3b(c)(3)(A)]

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- ii. If multiple fuels are used, the Permittee shall keep records of the quantity in tons of each criteria pollutant emitted for each month and each 12 month rolling aggregate.

 [RCSA §22a-174-3b(c)(3)(C)]
- iii. The Permittee shall make and maintain records of the date each annual tune-up is performed. [RCSA §22a-174-3b(c)(3)(D)]
- iv. The Permittee shall maintain all records for five years from the date such record is created. [RCSA §22a-174-3b(c)(2)(B)]
- d. Reporting Requirements

The Permittee shall make all records kept to determine compliance with RCSA §22a-174-3b(c) available to the commissioner to inspect and copy upon request. [RCSA §22a-174-3b(c)(2)(A)]

2. NOx – RCSA §22a-174-22e (Phase 1 & Phase 2 Requirements)

- a. Limitation or Restriction
 - i. Prior to June 1, 2023 the Permittee shall not cause or allow emissions of NOx as determined by NOx emission testing pursuant to RCSA §22a-174-22e(l) for the package boiler to exceed the following: [RCSA §22a-174-22e(d)(3)(A) and (C)]
 - (A) Phase 1 (Beginning June 1, 2018 and ending May 31, 2023)
 - (1) Natural Gas: 0.20 lb/MMBtu
 - (2) No. 2 Fuel Oil: 0.20 lb/MMBtu
 - (B) Phase 2 (Beginning June 1, 2023 and continuing thereafter)
 - (1) Natural Gas: 0.05 lb/MMBtu
 - (2) No. 2 Fuel Oil: 0.10 lb/MMBtu
 - ii. The Permittee of an emission unit shall not cause or allow an emission unit to exceed the applicable emissions limitations specified in Section III.E.2.a.i in this Title V permit unless the Permittee undertakes one of the following actions: [RCSA §§22a-174-22e(d)(1)(A), (B) and (C)]
 - (A) Implements an alternative compliance mechanism as provided in RCSA §22a-174-22e(g);
 - (B) Operates under a case-by-case RACT determination as provided in RCSA §22a-174-22e(h);
 - (C) Ceases operation as provided in RCSA §22a-174-22e(f)
- b. Monitoring and Testing Requirements
 - i. The Permittee shall conduct an inspection and tune-up of the boiler a minimum of once per calendar year. Each subsequent annual tune-up shall be performed no earlier than 180 days after the previous tune-up conducted in accordance with RCSA §22a-174-22e(i)(1). [RCSA §22a-174-22e(i)(1)]

- ii. The Permittee shall conduct an initial emission test to demonstrate compliance with NOx emissions limit no more than 63 calendar months after the date of the last emissions test performed pursuant to former section RCSA §22a-174-22(k). [RCSA §22a-174-22e(l)(4)]
- iii. The Permittee shall conduct the emission test following the initial test after May 31, 2023 and no later than June 1, 2025. Subsequent emissions testing shall be conducted no more than 63 months from the date of the previous test or from the date the previous test was due, whichever is earlier. Once every five years from the date of the previous test or five years from the date the previous test was due, whichever is earlier. [RCSA §22a-174-22e(1)(5)]
- iv. Each emission test shall be conducted in accordance with RCSA §22a-174-5. Compliance with the NOx emission limitation shall be determined based on the average of three one-hour tests, each performed over a consecutive 60-minute period. If the commissioner determines that three one-hour tests are not reasonable given the location, configuration or operating conditions of the unit, the commissioner may approve testing based on the average of shorter test runs. [RCSA §22a-174-22e(1)(6)]

c. Record Keeping Requirements

- i. The Permittee of an emission unit subject to RCSA §22a-174-22e shall make and keep the following records on and after May 1, 2018: [RCSA §22a-174-22e(j)(2)]
 - (A) For each tune-up, for each emission unit, conducted pursuant to RCSA §22a-174-22e;
 - (1) The date on which the emission unit is tuned-up; the name, title and affiliation of the person performing the tune-up, and a description of work performed, and
 - (2) The procedures used to inspect and perform adjustments.
 - (B) Copies of all documents submitted to the commissioner pursuant to RCSA §22a-174-22e;
 - (C) The date and work performed for repairs, replacement of parts and other maintenance;
 - (D) The dates, times, and places of all emission testing required, 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)]
- ii. The Permittee shall keep any records or reports required by an order or permit issued by the commissioner pursuant to RCSA §22a-174-22e. [RCSA §22a-174-22e(j)(2)(G)]
- iii. The Permittee shall retain all records and reports produced pursuant to RCSA §22a-174-22e for five years. Such records and reports shall be available for inspection at reasonable hours by the commissioner or the administrator. Such records shall be retained at the premises where the emission unit is located, unless the commissioner approves in writing the use of another location in Connecticut. [RCSA §22a-174-22e(j)(1)]

d. Reporting Requirements

Not more than 60 days after the completion of emission tests conducted in accordance with RCSA \$22a-174-22e(1) the Permittee shall submit a written report of the results of such testing to the commissioner. [RCSA \$22a-174-22e(k)(1)

3. SO₂

a. Limitation or Restriction

Except as provided in RCSA §22a-174-19b(c) or (e) the sulfur content of the distillate fuel oil combusted in the package boiler shall not exceed 15 ppm (0.0015%) by weight. [RCSA §22a-174-19b(d)]

b. Monitoring and Testing Requirements

Compliance with the SO_2 standard shall be determined by the Permittee by recording and maintaining records of the amount of fuel combusted during each calendar month. [40 CFR $\S60.48c(g)(2)$]

c. Record Keeping Requirements

- i. Compliance with the SO₂ standard shall be determined by the Permittee by recording and maintaining records of the amount of fuel combusted during each calendar month. [40 CFR §60.48c(g)(2)]
- ii. The Permittee shall keep information necessary for the commissioner to determine compliance with the requirements of Section III. E.3.a of this Title V permit. Such data shall be maintained at the site for a minimum of five years, commencing from the date such records were created and made available upon request by the commissioner. [RCSA §22a-174-3b(c)(2)]

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)]

F. STRATOSPHERIC OZONE DEPLETING SUBSTANCES (40 CFR PART 82) REQUIREMENTS FOR GEU-2 –Three CENTRIFUGAL CHILLERS

The Permittee shall comply with the standards for recycling and emissions reduction of products using ozone depleting substances pursuant to 40 CFR Part 82, Subpart E (Labeling of Products Using Ozone-Depleting Substances) and Subpart F (Recycling and Emission Reduction). The specific subsections that may apply, depending on whether a CDECCA technician or an outside contractor is performing a covered activity, are as follows:

Subpart E: Section 82.102

Section 82.104 Section 82.106 Section 82.108 Section 82.110 Section 82.112; and Section 82.124

Subpart F: Section 82.154(a), (b), (e), (i), and (n)

Section 82.156(a), (b), (c), (d), (e), and (i)

Section 82.161

Section 82.166(b), (k), (l), (m), (n), (o), (p), and (q)

G. FEDERAL ACID RAIN PERMIT REQUIREMENTS

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

a. EU-1 & EU-2 (General Electric Gas Turbine and John Zinc Duct Burner)

| | | | 2014 | 2015 | 2016 | 2017 | 2018 |
|-----------------------|--|--|---|------|------|------|------|
| EU-1 & 2 (0000GT) | | 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 | | | | |
| 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.

H. 112(r) ACCIDENTAL RELEASE REQUIREMENTS

Should any of the units, as defined in 40 CFR §68.3, become subject to the accidental release prevention regulations in 40 CFR Part 68, then the Permittee shall submit a risk management plan pursuant to 40 CFR §68.12 by the date specified in 40 CFR §68.10 and shall certify compliance with the requirements of 40 CFR Part 68 as part of the annual compliance certification as required by 40 CFR §70.6(c)(5).

I. 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.
- 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, as applicable.
- **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 renovations 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 Condition

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.

Section V: State Enforceable Terms and Condition

- 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.
- **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.** Carbon Dioxide Emissions: The Permittee shall comply with the requirements for Control of Carbon Dioxide Emissions as set forth in RCSA §22a-174-31.

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; 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:

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 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.

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.

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.

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.

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.

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

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