Connecticut
Department of Energy &
Environmental Protection

# BUREAU OF AIR MANAGEMENT
# TITLE V OPERATING PERMIT

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

| | |
|---|---|
| **Title V Permit Number** | 098-0029-TV |
| **Client/Sequence/Town/Premises Numbers** | 1138/1/98/15 |
| **Date Issued** | |
| **Expiration Date** | |

**Corporation:**

*The University of Connecticut – Storrs Campus*

**Premises Location:**

*25 LeDoyt Road, Storrs, CT 06269-3252*

**Name of Responsible Official and Title:**

*Radenka Maric, President*

All the following attached pages, 2 through 108, are hereby incorporated by reference into this Title V permit.

Katherine S. Dykes
Commissioner

Date

# TABLE OF CONTENTS

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

## LIST OF ABBREVIATIONS/ACRONYMS

| *Abbreviation/Acronym* | *Description* |
|---|---|
| ccf | One hundred cubic feet |
| CEM | Continuous Emission Monitor |
| CFR | Code of Federal Regulations |
| CGS | Connecticut General Statutes |
| CO | Carbon Monoxide |
| P | Construction Permit/Operating Permit |
| DEEP | Department of Energy and Environmental Protection |
| EDR | Emergency Demand Response |
| EO&M | Emergency, Operational & Maintenance |
| EPA | Environmental Protection Agency |
| EU | Emissions Unit |
| $ft^3/hr$ | Feet cube per hour |
| gm/bk hp-hr | Grams per brake horsepower hour |
| GEU | Grouped Emissions Unit |
| GHG | Green House Gases |
| HAP | Hazardous Air Pollutant |
| HC | Hydrocarbon |
| hp | Horsepower |
| hr | Hour |
| HVAC | Heating, Ventilation and Air Conditioning |
| kW | Kilowatt |
| kWe | Electrical power output in Kilowatts |
| lb | Pound |
| LPG | Liquefied Petroleum Gas |
| MMBtu | Million British Thermal Units |
| MMcf | Million Cubic Feet |
| $MMft^3$ | Million cubic feet |
| MW | Megawatts |
| NG | Natural Gas |
| $NO_x$ | Nitrogen Oxides |
| NSR | New Source Review |
| $O_2$ | Oxygen |
| P | Permit |
| Pb | Lead |
| PM | Particulate Matter |
| $PM_{10}$ | Particulate Matter less than 10 microns |
| $PM_{2.5}$ | Particulate Matter less than 2.5 microns |
| ppmvd | Parts per million, volumetric basis dry |
| R | Registration |
| RCSA | Regulations of Connecticut State Agencies |
| RICE | Reciprocating Internal Combustion Engine |
| scf | Standard cubic feet |
| SI | Spark Ignition |
| SIC | Standard Industrial Classification Code |
| $SO_2$ | Sulfur Dioxide |
| SOx | Sulfur Oxides |

## LIST OF ABBREVIATIONS/ACRONYMS, continued

| *Abbreviation/Acronym* | *Description* |
|---|---|
| SOS | Standard Operating Scenario |
| TPY | Tons per year |
| TSP | Total Suspended Particulate |
| ULSD | Ultra Low Sulfur Diesel |
| VOC | Volatile Organic Compound |
| WPCF | Water Pollution Control Facility |

## Section I: Premises Information/Description

### A. PREMISES INFORMATION

Nature of Business: The University of Connecticut
Primary SIC: 8221

Facility Mailing Address: 25 LeDoyt Road, Unit 3252, Storrs, CT 06269-3252
Telephone Number: (860) 486-2000

### B. PREMISES DESCRIPTION

The University of Connecticut (UCONN), Storrs Campus is an institution of higher education offering both graduate and undergraduate courses of study. The campus includes laboratories, classrooms, administrative offices, and residential buildings as well as other buildings and areas associated with the operation of a university such as a wastewater treatment facility, central utility plant, cogeneration facility, Supplemental Utility Plant, infirmary, various places of worship, library, and sports facilities.

UCONN is a Title V source located in a serious ozone non-attainment area as defined in RCSA Section 22a-174-1.

UCONN is a **major source for NOx, VOC, CO, SOx, PM, $PM_{10}$**, and **GHG**. Because particle size data and specific $PM_{2.5}$ emission factors are not available for many of UCONN's emissions sources, it is conservatively assumed that all PM emissions are in the form of $PM_{2.5}$ and that UCONN is, therefore, also a major source of **$PM_{2.5}$**.

Permit Nos. 098-0056, 098-0061 and 098-0062 were originally issued on September 13, 2004 and have a Premises Wide Emission Cap for HAPs limiting annual HAP emissions for the premises to less than 10 TPY of a single HAP and less than 25 TPY of any combination of HAPs. As such UCONN is considered an **area source for HAPs.**

The air emissions units located at the premises with source specific applicable requirements are as follows:

Central Utility Plant:

- Two boilers (Boiler 1 and 2) operating under Permit Nos. 098-0063 and 098-0064 and subject to 40 CFR Part 60 Subpart Db – Standards of Performance for Industrial, Commercial, Institutional Steam Generating Units and 40 CFR Part 63 Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers for Area Sources (EU-1442 and EU-1443).
- Boiler No. 9 operating under Permit No. 098-0026 and subject to 40 CFR Part 60 Subpart Db – Standards of Performance for Industrial, Commercial, Institutional Steam Generating Units and 40 CFR Part 63 Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers for Area Sources (EU-558).
- Two 1,250 kW diesel fired emergency engines subject to the requirements of 40 CFR Part 63 Subpart ZZZZ – National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (EU-565, EU-566).
- One 1,500 kW emergency diesel engine which provides black-start emergency power to the Cogeneration Facility. This black-start emergency engine is subject to the requirements of 40 CFR Part 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (EU-598).
- Four TECOCHILL CH-400 units, each driven by two natural gas fired non-emergency engines. The engines are subject to 40 CFR Part 60 Subpart JJJJ – Standards of Performance for Stationary

## Section I: Premises Information/Description

Spark Ignition Internal Combustion Engines (EU-1436, EU-1437, EU-1438, EU-1439).

Supplemental Utility Plant:

- One boiler (Boiler 10) operating under Permit No. 098-0065 and subject to 40 CFR Part 60 Subpart Db – Standards of Performance for Industrial, Commercial, Institutional Steam Generating Units and 40 CFR Part 63 Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers for Area Sources (EU-1444).
- Two 2,000 kW diesel emergency engines subject to 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (EU-1445, EU-1446)

The South Campus Chiller Plant:

- One diesel fired emergency engine. The engine is subject to 40 CFR Part 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (EU-579).

The Cogeneration Facility:

- Three combustion turbines each with a corresponding duct burner. The combustion turbines are subject to 40 CFR Part 60 Subpart GG – Standards of Performance for Stationary Gas Turbines; while the duct burners are subject to 40 CFR Part 60 Subpart Dc – Standards of Performance for Small Industrial, Commercial, Institutional Steam Generating Units (EU-600, EU-601, EU-602).

Water Pollution Control Facility:

- Oil fired boiler subject to 40 CFR Part 63 Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers Area Sources (EU-549).

Additionally, UCONN operates several emergency engines under NSR permits or RCSA § 22a-174-3b. The emergency engines are subject to one of the following federal regulations:

- 40 CFR Part 63 Subpart ZZZZ;
- 40 CFR Part 60 Subpart IIII; or
- 40 CFR Part 60 Subpart JJJJ.

At the Motor Pool, gasoline and diesel fuel are stored and dispensed for use in campus vehicles. The fuel distribution operations are subject to RCSA §§22a-174-20, 22a-174-30a and 40 CFR Part 63 Subpart CCCCCC – National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities (EU-551).

UCONN also operates a reclaimed water facility, a “less than 90 days” hazardous waste storage facility, HVAC cooling towers and a woodworking shop.

## Section II: Emissions Units Information

### A. EMISSIONS UNITS DESCRIPTION

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

**TABLE II.A: EMISSIONS UNITS DESCRIPTION**

| Emissions Unit/ Grouped Emissions Units | Emissions Unit Description | Control Unit Description | Permit, Order, Registration, or Regulation Number |
|---|---|---|---|
| EU-1 (GEU-10) | 3.88 MMBtu/hr (350 kWe/568 hp) Kohler Model 350 ROZD emergency engine<br><br>Construction date: 1/1/1992<br><br>**Beach Building** | N/A | P 098-0011<br><br>RCSA §22a-174-22e<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-2 (GEU-10) | 6.65 MMBtu/hr (600 kWe/947 hp) Kohler Model 600 ROZD81 emergency engine<br><br>Construction date: 1/1/1992<br><br>**School of Psychology** | N/A | P 098-0012<br><br>RCSA §22a-174-22e<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-5 (GEU-11) | 1.55 MMBtu/hr (150 kWe/250 hp) Kohler Model 150 ROZD emergency engine<br><br>Construction date: 5/4/1993<br><br>**Biobehavioral Building No. 4 Annex** | N/A | P 098-0015<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-8 (GEU-11) | 2.40 MMBtu/hr (200 kWe/335 hp*) Cummins Model NT-855GS2 emergency engine<br><br>Construction date: 6/24/1993<br><br>**Gampel Pavilion** | N/A | P 098-0018<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-9 (GEU-10) | 4.60 MMBtu/hr (400 kWe/643 hp) Kohler Model 400 ROZD71 emergency engine<br><br>Construction date: 10/26/1993<br><br>**Fenton River Well Field** | N/A | P 098-0019<br><br>RCSA §22a-174-22e<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-19 (GEU-13) | 2.50 MMBtu/hr (170 kWe/285 hp*) Onan Model 170 WB emergency engine<br><br>Construction date: pre-1989<br><br>**Biobehavioral Building No. 4** | N/A | 40 CFR Part 63 Subpart ZZZZ |

## Section II: Emissions Units Information

| TABLE II.A: EMISSIONS UNITS DESCRIPTION | | | |
|---|---|---|---|
| **Emissions Unit/ Grouped Emissions Units** | **Emissions Unit Description** | **Control Unit Description** | **Permit, Order, Registration, or Regulation Number** |
| EU-20 (GEU-13) | 0.60 MMBtu/hr (30 kWe/50 hp*) Onan Model 30EK4R8 emergency engine<br><br>Construction date: 1971<br><br>**Ellsworth Hall** | N/A | 40 CFR Part 63 Subpart ZZZZ |
| EU-27 (GEU-13) | 0.28 MMBtu/hr (15 kWe/25 hp*) Onan 15 JC-3CR emergency engine<br><br>Construction date: 1955<br><br>**Hollister (E-Project)** | N/A | 40 CFR Part 63 Subpart ZZZZ |
| EU-30 (GEU-13) | 1.81 MMBtu/hr (100 kWe/220 hp) Cummins G855 GS/GC emergency engine<br><br>Construction date: 1995<br><br>**Facilities Operations** | N/A | 40 CFR Part 63 Subpart ZZZZ |
| EU-42 (GEU-13) | 0.28 MMBtu/hr (15 kWe/25 hp*) Onan 15-RJC-4XR emergency engine<br><br>Construction date: 1970<br><br>**New Fine Arts Building** | N/A | 40 CFR Part 63 Subpart ZZZZ |
| EU-48 (GEU-13) | 1.2 MMBtu/hr (80 kWe/150 hp) Kohler Model 80 RZG emergency engine<br><br>Construction date: 1974<br><br>**Whitney Hall** | N/A | 40 CFR Part 63 Subpart ZZZZ |
| EU-54 (GEU-1) | 2.63 MMBtu/hr (230 kWe/370 hp) Kohler 230ROZD81 emergency engine<br><br>Construction date: 2/1/1991<br><br>**Commissary Warehouse** | N/A | RCSA §22a-174-3b(e)<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-55 (GEU-2) | 5.38 MMBtu/hr (500 kWe/749 hp) Caterpillar 3412 emergency engine<br><br>Construction date: 10/1/1996<br><br>**Thomas J. Dodd Research Center** | N/A | RCSA §22a-174-3b(e) RCSA §22a-174-22e<br><br>40 CFR Part 63 Subpart ZZZZ |

## Section II: Emissions Units Information

| TABLE II.A: EMISSIONS UNITS DESCRIPTION | | | |
|---|---|---|---|
| **Emissions Unit/ Grouped Emissions Units** | **Emissions Unit Description** | **Control Unit Description** | **Permit, Order, Registration, or Regulation Number** |
| EU-56 (GEU-13) | 2.93 MMBtu/hr (250 kWe/419 hp*) Cummins 250 DFBE emergency engine<br><br>Construction date: 1988<br><br>**Student Health Services** | N/A | 40 CFR Part 63 Subpart ZZZZ |
| EU-57 (GEU-13) | 2.93 MMBtu/hr (250 kWe/419 hp*) Onan 250 DYB-4R8 emergency engine<br><br>Construction date: 1970<br><br>**Institute of Materials Science** | N/A | 40 CFR Part 63 Subpart ZZZZ |
| EU-59 (GEU-13) | 0.29 MMBtu/hr (25 kWe/66 hp) Kohler 20ROZJ81 emergency engine<br><br>Construction date: 1953<br><br>**Jorgensen Auditorium** | N/A | 40 CFR Part 63 Subpart ZZZZ |
| EU-63 (GEU-10) | 4.7 MMBtu/hr (500 kW/838 hp*) Onan 500 DFFB emergency engine<br><br>Construction date: 7/1/1995<br><br>**Water Pollution Control Facility** | N/A | P 098-0054<br><br>RCSA §22a-174-22e<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-66 (GEU-19) | 0.51 MMBtu/hr (35 kWe/66 hp) Onan 35DGBB emergency engine<br><br>Construction date: 1/1/1995<br><br>**WPCF at Eastwood Road** | N/A | P 098-0026 Collateral Conditions<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-68 (GEU-19) | 0.51 MMBtu/hr (35 kWe/66 hp) Onan 35DGBB emergency engine<br><br>Construction date: 6/12/1995<br><br>**WPCF at Northwood Apartments** | N/A | P 098-0026 Collateral Conditions<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-549 | 2.0 MMBtu/hr boiler<br><br>Construction date: unknown<br><br>**Water Pollution Control Facility** | N/A | 40 CFR Part 63 Subpart JJJJJJ |
| EU-551 | Motor Pool Fuel Distribution | Vapor Recovery | RCSA §22a-174-20 RCSA §22a-174-30a |

## Section II: Emissions Units Information

| TABLE II.A: EMISSIONS UNITS DESCRIPTION | | | |
|---|---|---|---|
| **Emissions Unit/ Grouped Emissions Units** | **Emissions Unit Description** | **Control Unit Description** | **Permit, Order, Registration, or Regulation Number** |
| | Construction date: 1995<br><br>**Motor Pool** | | 40 CFR Part 63 Subpart CCCCCC |
| EU-558 | 121.2 MMBtu/hr (NG) & 115.5 MMBtu/hr (oil) Boiler No. 9, English D-Type boiler Model APP-100-250<br><br>Construction date: 2001<br><br>**Central Utility Plant** | Low NOx burners & Flue Gas Recirculation | P 098-0026<br><br>RCSA §22a-174-22e<br><br>40 CFR Part 60 Subpart Db<br><br>40 CFR Part 63 Subpart JJJJJJ |
| EU-565 (GEU-2) | 12 MMBtu/hr (1,250 kWe/1,881 hp) Mitsubishi RM-1250 emergency engine No. 1<br><br>Construction date: 1/1/1997<br><br>**Central Utility Plant** | N/A | RCSA §22a-174-3b(e)<br>RCSA §22a-174-22e<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-566 (GEU-2) | 12 MMBtu/hr (1,250 kWe/1,881 hp) Mitsubishi RM-1250 emergency engine No. 2<br><br>Construction date: 1/1/1997<br><br>**Central Utility Plant** | N/A | RCSA §22a-174-3b(e)<br>RCSA §22a-174-22e<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-567 (GEU-1) | 1.14 MMBtu/hr (100 kWe/168 hp) Detroit Model DS60 emergency engine<br><br>Construction date: 1/1/2001<br><br>**North Campus Parking Garage** | N/A | RCSA §22a-174-3b(e)<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-568 (GEU-2) | 4.05 MMBtu/hr (325 kWe/531 hp) Cummins GTA 19 emergency engine<br><br>Construction date: 4/4/1999<br><br>**Ag-Biotech Building** | N/A | RCSA §22a-174-3b(e)<br>RCSA §22a-174-22e<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-575 (GEU-13) | 0.62 MMBtu/hr (30 kWe/82 hp) Kohler Model 30 RZ 72 emergency engine<br><br>Construction date:1997 | N/A | 40 CFR Part 63 Subpart ZZZZ |

## Section II: Emissions Units Information

| TABLE II.A: EMISSIONS UNITS DESCRIPTION | | | |
|---|---|---|---|
| **Emissions Unit/ Grouped Emissions Units** | **Emissions Unit Description** | **Control Unit Description** | **Permit, Order, Registration, or Regulation Number** |
| | **Field House** | | |
| EU-576 (GEU-1) | 1.47 MMBtu/hr (150 kWe/250 hp) Kohler 150ROZJ emergency fire pump engine<br><br>Construction date: 7/1/1997<br><br>**Field House** | N/A | RCSA §22a-174-3b(e)<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-579 (GEU-2) | 5.06 MMBtu/hr (450 kWe/760 hp) Kohler Model 450ROZD emergency engine<br><br>Construction date: 8/1/1998<br><br>**South Campus Chiller Plant** | N/A | RCSA §22a-174-3b(e)<br>RCSA §22a-174-22e<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-584 (GEU-20) | 2.19 MMBtu/hr (160 kWe/268 hp*) Caterpillar Model SR4B emergency engine<br><br>Construction date: 1/1/2002<br><br>**Alumni Quad** | N/A | P 098-0026 Collateral Conditions<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-585 (GEU-20) | 1.09 MMBtu/hr (80 kWe/150 hp) Kohler Model 80 RZG emergency engine<br><br>Construction date: 1/1/2002<br><br>**Buckley Hall** | N/A | P 098-0026 Collateral Conditions<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-586 (GEU-20) | 0.90 MMBtu/hr (60 kWe/105 hp) Kohler Model 60 RZG emergency engine<br><br>Construction date: 1/1/2002<br><br>**Shippee Hall** | N/A | P 098-0026 Collateral Conditions<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-587 (GEU-20) | 0.91 MMBtu/hr (55 kWe/92 hp*) Onan Model 55 EN-15R emergency engine<br><br>Construction date: 1/1/2002<br><br>**McMahon Hall** | N/A | P 098-0026 Collateral Conditions<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-588 (GEU-20) | 1.6 MMBtu/hr (100 kWe/173 hp) Caterpillar Model Olympian G100 F1 emergency engine<br>Construction date: 1/1/2001 | Catalytic Converter | P 098-0026 Collateral Conditions<br><br>40 CFR Part 63 Subpart ZZZZ |

## Section II: Emissions Units Information

| TABLE II.A: EMISSIONS UNITS DESCRIPTION | | | |
|---|---|---|---|
| **Emissions Unit/ Grouped Emissions Units** | **Emissions Unit Description** | **Control Unit Description** | **Permit, Order, Registration, or Regulation Number** |
| | **Hilltop (Capstone) Apartments** | | |
| EU-591 (GEU-20) | 0.30 MMBtu/hr (17 kWe/37 hp) Kohler Model17RYQS2 emergency engine<br><br>Construction date: 1/1/2002<br><br>**Hilltop Dorms** | N/A | P 098-0026 Collateral Conditions<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-598 (GEU-2) | 14.88 MMBtu/hr (1,500 kWe/2,172 hp) Caterpillar - Black start emergency engine<br><br>Construction date: 7/1/2005<br><br>**Central Utility Plant** | N/A | RCSA §22a-174-3b(e) RCSA §22a-174-22e<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-599 (GEU-20) | 0.49 MMBtu/hr (35 kWe/57 hp) Cummins Model 35 GGFD emergency engine<br><br>Construction date: 11/08/2004<br><br>**Poultry Facility** | N/A | P 098-0056, 098-0061 and 098-0062 Collateral Conditions<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-600 (GEU-7) | 7 MW Solar Taurus Model 70 Combustion Turbine with a 60 MMBtu/hr duct burner<br><br>Construction date: 9/16/2004<br><br>**Cogeneration Facility** | Selective Catalytic Reduction, Oxidation Catalyst<br><br>Turbine Only: Dry-Low NOx Combustor | P 098-0056 RCSA §22a-174-22e<br><br>40 CFR Part 60 Subparts Dc (duct burner) and GG (turbine) |
| EU-601 (GEU-7) | 7 MW Solar Taurus Model 70 Combustion Turbine with a 60 MMBtu/hr duct burner<br><br>Construction date: 9/16/2004<br><br>**Cogeneration Facility** | Selective Catalytic Reduction, Oxidation Catalyst<br><br>Turbine Only: Dry-Low NOx Combustor | P 098-0061 RCSA §22a-174-22e 40 CFR Part 60 Subparts Dc (duct burner) and GG (turbine) |
| EU-602 (GEU-7) | 7 MW Solar Taurus Model 70 Combustion Turbine with a 60 MMBtu/hr duct burner<br><br>Construction date: 9/16/2004<br><br>**Cogeneration Facility** | Selective Catalytic Reduction, Oxidation Catalyst<br><br>Turbine Only: Dry-Low NOx Combustor | P 098-0062 RCSA §22a-174-22e<br><br>40 CFR Part 60 Subparts Dc (duct burner) and GG (turbine) |
| EU-606 | 0.79 MMBtu/hr (60 kWe/115 hp) | N/A | P 098-0056, 098-0061 |

## Section II: Emissions Units Information

| TABLE II.A: EMISSIONS UNITS DESCRIPTION | | | |
|---|---|---|---|
| **Emissions Unit/ Grouped Emissions Units** | **Emissions Unit Description** | **Control Unit Description** | **Permit, Order, Registration, or Regulation Number** |
| (GEU-20) | Cummins Model 60GGHE 5749810 emergency engine<br><br>Construction date: 11/1/2006<br><br>**Burton Football Complex** | | and 098-0062 Collateral Conditions<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-607 (GEU-1) | 2.88 MMBtu/hr (250 kW/383 hp) Cummins emergency engine<br><br>Construction date: 1/1/2003<br><br>**Towers Dorms** | N/A | RCSA §22a-174-3b€<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-608 (GEU-13) | 0.28 MMBtu/hr (30 kWe/45 hp) Perkins PDFP-L4YN emergency fire pump engine<br><br>Construction date: 1998<br><br>**Ice Rink** | N/A | 40 CFR Part 63 Subpart ZZZZ |
| Subgroup 1 (GEU-8) | Nine Laars RHEOS+ Model 1600 and three Laars RHEOS+ Model 2000 boilers or equivalent<br><br>Construction date: 8/1/2005<br><br>**Hilltop Apartments** | N/A | P 098-0056, 098-0061 and 098-0062 Collateral Conditions |
| Subgroup 2 (GEU-8) | All natural gas fired heating equipment<br><br>Construction date: 2001 (Hilltop); 2003 (Others)<br><br>**Charter Oak Apartments and Suites, Husky Village, Hilltop Apartments Community Center (2353 Alumni Drive), and Hilltop Apartments Building No. 22 (22 Husky Circle)** | N/A | P 098-0056, 098-0061 and 098-0062 Collateral Conditions |
| Subgroup 3 (GEU-8) | All natural gas fired heating equipment<br><br>Construction date: 1/1/2001<br><br>**Hilltop Suites** | N/A | P 098-0056, 098-0061 and 098-0062 Collateral Conditions |
| Subgroup 4 (GEU-8) | All natural gas fired heating equipment | N/A | P 098-0026 Collateral Conditions |

## Section II: Emissions Units Information

| TABLE II.A: EMISSIONS UNITS DESCRIPTION | | | |
|---|---|---|---|
| **Emissions Unit/ Grouped Emissions Units** | **Emissions Unit Description** | **Control Unit Description** | **Permit, Order, Registration, or Regulation Number** |
| | Construction date: 2016<br><br>**Next Generation Connecticut Residence Hall** | | |
| Subgroup 5 (GEU-8) | All natural gas fired heating equipment<br><br>Construction date: Some pre-1991; some 2016-2017<br><br>**Northwood Apartments** | N/A | P 098-0026 Collateral Conditions |
| Subgroup 6 (GEU-8) | All natural gas fired heating equipment<br><br>Construction date: 2017<br><br>**Innovation Partnership Building** | N/A | P 098-0026 Collateral Conditions |
| EU-1283 (GEU-17) | 5.85 MMBtu/hr (600 kWe/900 hp) Caterpillar C18 ATAAC emergency engine<br><br>Construction date: 8/1/2011<br><br>**Willimantic Well Field** | N/A | RCSA §22a-174-3b(e)<br>RCSA §22a-174-22e<br><br>40 CFR Part 60 Subpart IIII |
| EU-1284 (GEU-21) | 2.12 MMBtu/hr (150 kWe/224 hp) Olympian G150LG Emergency engine<br><br>Construction date: 7/1/2012<br><br>**Floriculture Building** | N/A | P 098-0026 Collateral Conditions<br><br>40 CFR Part 60 Subpart JJJJ |
| EU-1285 (GEU-21) | 0.29 MMBtu/hr (20 kWe/34 hp*) Generac Model 005887-1 Emergency engine<br><br>Construction date: 4/1/2012<br><br>**President's Residence** | N/A | P 098-0026 Collateral Condition<br><br>40 CFR Part 60 Subpart JJJJ |
| EU-1286 (GEU-17) | 4.53 MMBtu/hr (500 kWe/752 hp) MTU DS00500D6SRAH1484 emergency engine<br><br>Construction date: 12/1/2012<br><br>**Reclaimed Water Facility Building** | N/A | RCSA §22a-174-3b(e)<br>RCSA §22a-174-22e<br><br>40 CFR Part 60 Subpart IIII |
| EU-1314 | 1.95 MMBtu/hr (150 kWe/225 hp) Cummins Model 150 GGLB emergency engine | N/A | 40 CFR Part 60 Subpart JJJJ |

## Section II: Emissions Units Information

| TABLE II.A: EMISSIONS UNITS DESCRIPTION | | | |
|---|---|---|---|
| **Emissions Unit/ Grouped Emissions Units** | **Emissions Unit Description** | **Control Unit Description** | **Permit, Order, Registration, or Regulation Number** |
| | Construction date: 2013<br><br>**Young Building** | | |
| EU-1315 (GEU-16) | 0.59 MMBtu/hr (40 kWe/64 hp) Cummins 40 GGPB Emergency engine<br><br>Construction date: 8/1/2014<br><br>**Basketball Training Facility** | N/A | RCSA §22a-174-3b(e)<br><br>40 CFR Part 60 Subpart JJJJ |
| EU-1322 | 1.50 MMBtu/hr (153 kWe/241 hp) Marathon MMG175 emergency engine<br><br>Construction date: 7/1/2014<br><br>**Mobile Generator** | N/A | RCSA §22a-174-3b(e)<br><br>40 CFR Part 60 Subpart IIII |
| EU-1323 (GEU-20) | 0.71 MMBtu/hr (65 kWe/99 hp) Ingersoll-Rand S60 emergency engine<br><br>Construction date: 4/1/2015<br><br>**WHUS Radio Tower** | N/A | P 098-0026 Collateral Condition<br><br>40 CFR Part 63 Subpart ZZZZ |
| EU-1324 (GEU-17) | 4.82 MMBtu/hr (500 kWe/762 hp) Taylor TMC500 emergency engine<br><br>Construction date: 10/1/2015<br><br>**Mobile Generator** | N/A | RCSA §22a-174-3b(e)<br>RCSA §22a-174-22e<br><br>40 CFR Part 60 Subpart IIII |
| EU-1325 (GEU-16) | 1.12 MMBtu/hr (100 kWe/149 hp) Generac SG100 emergency engine<br><br>Construction date: 3/17/2017<br><br>**Main Accumulation Area** | N/A | RCSA §22a-174-3b(e)<br><br>40 CFR Part 60 Subpart JJJJ |
| EU-1330 (GEU-18) | 4.82 MMBtu/hr (400 kWe/636 hp) Generac MG400 emergency engine<br><br>Construction date: 9/1/2016<br><br>**Putnam Refectory** | N/A | P 098-0026 Collateral Conditions<br><br>RCSA §22a-174-22e<br><br>40 CFR Part 60 Subpart JJJJ |

## Section II: Emissions Units Information

| TABLE II.A: EMISSIONS UNITS DESCRIPTION | | | |
|---|---|---|---|
| **Emissions Unit/ Grouped Emissions Units** | **Emissions Unit Description** | **Control Unit Description** | **Permit, Order, Registration, or Regulation Number** |
| EU-1331 (GEU-18) | 4.82 MMBtu/hr (400 kWe/636 hp) Generac MG400 emergency engine<br><br>Construction date: 9/1/2016<br><br>**Putnam Refectory** | N/A | P 098-0026 Collateral Conditions<br><br>RCSA §22a-174-22e<br><br>40 CFR Part 60 Subpart JJJJ |
| EU-1332 (GEU-18) | 4.82 MMBtu/hr (400 kWe/636 hp) Generac MG400 emergency engine<br><br>Construction date: 9/1/2016<br><br>**Putnam Refectory** | N/A | P 098-0026 Collateral Conditions<br><br>RCSA §22a-174-22e<br><br>40 CFR Part 60 Subpart JJJJ |
| EU-1347 (GEU-17) | 4.15 MMBtu/hr (450 kWe/755 hp) Cummins 450DFEJ Emergency engine<br><br>Construction date: 8/1/2016<br><br>**Gurleyville Lift Station** | N/A | RCSA §22a-174-3b(e) RCSA §22a-174-22e<br><br>40 CFR Part 60 Subpart IIII |
| EU-1348 (GEU-18) | 4.86 MMBtu/hr (400 kWe/637 hp) Caterpillar G3412C emergency engine<br><br>Construction date: 9/1/2017<br><br>**Innovation Partnership Building** | N/A | P 098-0026 Collateral Conditions<br><br>RCSA §22a-174-22e<br><br>40 CFR Part 60 Subpart JJJJ |
| EU-1407 (GEU-16) | 0.93 MMBtu/hr (60 kWe/98 hp) Generac C60 Natural Gas emergency engine<br><br>Construction date: 9/1/2017<br><br>**Bronwell Building** | N/A | RCSA §22a-174-3b(e)<br><br>40 CFR Part 60 Subpart JJJJ |
| EU-1434 (GEU-17) | 6.97 MMBtu/hr (750 kWe/1100 hp) Cummins 750 DQBB emergency Engine<br><br>Construction Date: 5/1/2019<br><br>**HI-Head Pump Station** | N/A | RCSA §22a-174-3b(e) RCSA §22a-174-22e<br><br>40 CFR Part 60 Subpart IIII |
| EU-1435 (GEU-21) | 2.06 MMBtu/hr (150 kWe/251 hp*) Generac QT150 emergency engine<br><br>Construction date: 1/1/2018 | N/A | P 098-0026 Collateral Condition<br><br>40 CFR Part 60 Subpart |

## Section II: Emissions Units Information

| TABLE II.A: EMISSIONS UNITS DESCRIPTION | | | |
|---|---|---|---|
| **Emissions Unit/ Grouped Emissions Units** | **Emissions Unit Description** | **Control Unit Description** | **Permit, Order, Registration, or Regulation Number** |
| | | | JJJJ |
| | **Kellogg Barn** | | |
| EU-1436 (GEU-14) | 3.065 MMBtu/hr TECOCHILL CH-400 engine driven chiller powered by two 161 hp TecoDrive 7400LE ULTRA natural gas fired non-emergency engine<br>Construction date: 2019<br><br>**Central Utility Plant** | Catalytic converter | P 098-0026<br>*Collateral Condition*<br><br>40 CFR Part 60 Subpart JJJJ |
| EU-1437 (GEU-14) | 3.065 MMBtu/hr TECOCHILL CH-400 engine driven chiller powered by two 161 hp TecoDrive 7400LE ULTRA natural gas fired non-emergency engines<br><br>Construction date: 4/1/2019<br><br>**Central Utility Plant** | Catalytic converter | P 098-0026<br>*Collateral Condition*<br><br>40 CFR Part 60 Subpart JJJJ |
| EU-1438 (GEU-14) | 3.065 MMBtu/hr TECOCHILL CH-400 engine driven chiller powered by two 161 hp TecoDrive 7400LE ULTRA natural gas fired non-emergency engine<br><br>Construction date: 4/1/2019<br><br>**Central Utility Plant** | Catalytic converter | P 098-0026<br>*Collateral Condition*<br><br>40 CFR Part 60 Subpart JJJJ |
| EU-1439 (EU-14) | 3.065 MMBtu/hr TECOCHILL CH-400 engine driven chiller powered by two 161 hp TecoDrive 7400LE ULTRA natural gas fired non-emergency engine<br><br>Construction date: 4/1/2019<br><br>**Central Utility Plant** | Catalytic converter | P 098-0026<br>*Collateral Condition*<br><br>40 CFR Part 60 Subpart JJJJ |
| EU-1442 (GEU-15) | 120 MMBtu/hr on Natural Gas<br>113.3 MMBtu/hr on No. 2 Fuel Oil<br>Cleaver Brooks Boiler No. 1<br><br>Construction Date: 9/29/2021<br><br>**Central Utility Plant** | Low NOx Burner<br><br>Flue Gas Recirculation | P 098-0063<br><br>RCSA §22a-174-22e<br><br>40 CFR Part 60 Subpart Db<br>40 CFR Part 63 Subpart JJJJJJ |
| EU-1443 (GEU-15) | 120 MMBtu/hr on Natural Gas<br>113.3 MMBtu/hr on No. 2 Fuel Oil | Low NOx Burner | P 098-0064 |

## Section II: Emissions Units Information

| TABLE II.A: EMISSIONS UNITS DESCRIPTION | | | |
|---|---|---|---|
| **Emissions Unit/ Grouped Emissions Units** | **Emissions Unit Description** | **Control Unit Description** | **Permit, Order, Registration, or Regulation Number** |
| | Cleaver Brooks Boiler No. 2<br><br>Construction Date: 9/22/2021<br><br>**Central Utility Plant** | Flue Gas Recirculation | RCSA §22a-174-22e<br><br>40 CFR Part 60 Subpart Db<br>40 CFR Part 63 Subpart JJJJJJ |
| EU-1444 (GEU-15) | 120 MMBtu/hr on Natural Gas<br>113.3 MMBtu/hr on No. 2 Fuel Oil<br>Cleaver Brooks Boiler No. 10<br><br>Construction Date: 9/22/2021<br><br>**Supplemental Utility Plant** | Low NOx Burner<br><br>Flue Gas Recirculation | P 098-0065<br><br>RCSA §22a-174-22e<br><br>40 CFR Part 60 Subpart Db<br>40 CFR Part 63 Subpart JJJJJJ |
| EU-1445 (GEU-17) | 18.63 MMBtu/hr (2,000 kWe/2,922 hp)<br>Cummins 2000 DQKAE Diesel emergency engine<br><br>Construction date: 12/31/2021<br><br>**Supplemental Utility Plant** | N/A | RCSA §22a-174-3b(e)<br>RCSA §22a-174-22e<br><br>40 CFR Part 60 Subpart IIII |
| EU-1446 (GEU-17) | 18.63 MMBtu/hr (2,000 kWe/2,922 hp)<br>Cummins 2000 DQKAE Diesel emergency engine<br><br>Construction date: 2021<br><br>**Supplemental Utility Plant** | N/A | RCSA §22a-174-3b(e)<br>RCSA §22a-174-22e<br><br>40 CFR Part 60 Subpart IIII |
| EU-1447 | 1.42 MMBtu/hr (125 kWe/208 hp)<br>Cummins C125D6C Diesel emergency engine<br><br>Construction date: 2022<br><br>**Toscano Family Ice Forum** | N/A | P 098-0063<br>Collateral Condition<br><br>40 CFR Part 60 Subpart IIII |
| EU-1454 (GEU-17) | 3.19 MMBtu/hr (300 kWe/455 hp)<br>Cummins DQDAC Diesel emergency engine<br><br>Construction date: 12/1/2022<br><br>**Police/Fire Complex (Public Safety)** | N/A | RCSA §22a-174-3b(e)<br>RCSA §22a-174-22e<br><br>40 CFR Part 60 Subpart IIII |

* Engine rating was estimated since no manufacturer's data was available for this engine.

## B. GROUPED EMISSIONS UNITS DESCRIPTION

**TABLE II.B: GROUPED EMISSIONS UNITS DESCRIPTION**

| Grouped Emissions Units (GEU) | Grouped Emissions Unit Description |
|---|---|
| **GEU-1** | **EU-54, 567, 576, 607: Emergency engines**<br>• Operating under RCSA §22a-174-3b(e)<br>• Subject to 40 CFR Part 63 Subpart ZZZZ<br>• *Not subject to RCSA §22a-174-22e* |
| **GEU-2** | **EU-55, 565, 566, 568, 579, 598: Emergency engines**<br>• Operating under RCSA §22a-174-3b(e)<br>• Subject to RCSA §22a-174-22e<br>• Subject to 40 CFR Part 63 Subpart ZZZZ |
| **GEU-7** | **EU-600, 601, 602: Solar Taurus Model 70 Combustion Turbines with Duct Burners**<br>• Operating under NSR Permit Nos. 098-0056, 098-0061 and 098-0062<br>• Subject to RCSA §22a-174-22e<br>• Subject to 40 CFR Part 60 Subparts Dc (Duct burner) and GG (turbine) |
| **GEU-8** | **Subgroup 1: Nine Laars RHEOS+ Model 1600 and three Laars RHEOS+ Model 2000 Natural gas fired boilers or equivalent – Hilltop Apartments**<br>• Subject to Collateral Conditions in P 098-0056, 098-0061 and 098-0062 |
| | **Subgroup 2: All natural gas fired heating equipment – Charter Oak Apartments and Suites, Husky Village, Hilltop Apartments Community Center (2353 Alumni Drive), and Hilltop Apartments Building No. 22 (22 Husky Circle)**<br>• Subject to Collateral Conditions in P 098-0056, 098-0061 and 098-0062 |
| | **Subgroup 3: All natural Gas fired heating equipment – Hilltop Suites**<br>• Subject to Collateral Conditions in P 098-0056, 098-0061 and 098-0062 |
| | **Subgroup 4: All natural gas fired heating equipment – Next Generation Connecticut Hall**<br>• Subject to Collateral Conditions in P 098-0026 |
| | **Subgroup 5: All natural gas fired heating equipment – Northwood Apartments**<br>• Subject to Collateral Conditions in P 098-0026 |
| | **Subgroup 6: All natural gas fired heating equipment – Innovation Partnership Building**<br>• Subject to Collateral Conditions in P 098-0026 |
| **GEU-10** | **EU-1, 2, 9, 63: Emergency engines**<br>• Operating under NSR Permit Nos. 098-0011, 098-0012, 098-0019, 098-0054<br>• Subject to RCSA §22a-174-22e<br>• Subject to 40 CFR Part 63 Subpart ZZZZ |
| **GEU-11** | **EU-5, 8: Emergency engines**<br>• Operating under NSR Permit Nos. 098-0015, 098-0018<br>• Subject to 40 CFR Part 63 Subpart ZZZZ |
| **GEU-13** | **EU-19, 20, 27, 30, 42, 48, 56, 57, 59, 575, 608: Emergency engines**<br>• Subject to 40 CFR Part 63 Subpart ZZZZ: 19, 20, 27, 30, 42, 48, 56, 57, 59, 575, 608 |

## Section II: Emissions Units Information

| TABLE II.B: GROUPED EMISSIONS UNITS DESCRIPTION | |
|---|---|
| **Grouped Emissions Units (GEU)** | **Grouped Emissions Unit Description** |
| | • *Not subject to RCSA §§22a-174-3a or 22a-174-22e* |
| **GEU-14** | **EU-1436, 1437, 1438, 1439: TECOCHILL Chillers (non-emergency engines)**<br>• *Not subject to RCSA §22a-174-3a*<br>• Subject to Collateral Conditions in Permit No. 098-0026<br>• Subject to 40 CFR Part 60 Subpart JJJJ |
| **GEU-15** | **EU- 1442, 1443, 1444: Permitted Boilers**<br>• Operating under NSR Permit Nos. 098-0063, 098-0064, 098-0065<br>• Subject to RCSA §22a-174-22e<br>• Subject to 40 CFR Part 60 Subpart Db<br>• Subject to 40 CFR Part 63 Subpart JJJJJJ |
| **GEU-16** | **EU-1315, 1325, 1407: Emergency engines**<br>• Operating under RCSA §22a-174-3b(e)<br>• Subject to 40 CFR Part 60 Subpart JJJJ<br>• *Not subject to RCSA §22a-174-22e* |
| **GEU-17** | **EU-1283, 1286, 1324, 1347, 1434, 1445, 1446, 1454: Emergency engines**<br>• Operating under RCSA §22a-174-3b(e)<br>• Subject to RCSA §22a-174-22e<br>• Subject to 40 CFR Part 60 Subpart IIII |
| **GEU-18** | **EU-1330, 1331, 1332, 1348: Emergency engines**<br>• Limited to 300 hrs of operation (collateral condition in P 098-0026)<br>• Subject to RCSA §22a-174-22e<br>• Subject to 40 CFR Part 60 Subpart JJJJ |
| **GEU-19** | **EU-66, 68: emergency engines**<br>• Limited to 500 hrs of operation (collateral condition in P 098-0026)<br>• Subject to 40 CFR Part 63 Subpart ZZZZ<br>• *Not subject to RCSA §22a-174-22e* |
| **GEU-20** | **EU-584, 585, 586, 587, 588, 591, 599, 606, 1323: Emergency engines**<br>• Limited to 300 hrs of operation (collateral condition in P 098-0026): 584, 585,586,587, 588, 591, 1323<br>• Limited to 300 hrs of operation (collateral conditions in P 098-0056, 098-0061 and 098-0062): 599, 606<br>• Subject to 40 CFR Part 63 Subpart ZZZZ<br>• *Not subject to RCSA §22a-174-22e* |
| **GEU-21** | **EU-1284, 1285, 1435: Emergency engines**<br>• Limited to 300 hrs of operation (collateral condition in P 098-0026)<br>• Subject to 40 CFR Part 60 Subpart JJJJ<br>• *Not subject to RCSA §22a-174-22e* |

## Section II: Emissions Units Information

## C. STANDARD OPERATING SCENARIO IDENTIFICATION

**Standard Operating Scenario**

The Permittee shall be allowed to operate under the following standard operating scenario without notifying the commissioner, provided that such operations are explicitly provided for and described below.

The Permittee has identified the following standard operating scenarios:

1. Emergency engines: the standard use of the emergency engines is to provide power to the facility in case of a utility power outage, brownout, or other emergency.

2. Boilers: the standard use of the boilers is to provide steam for building heating, hot water and to operate some absorption chillers.

3. Motor pool fuel distribution: the standard use for the motor pool fuel distribution is to store and dispense gasoline and diesel fuel for campus vehicles.

4. Combustion turbines and duct burners: the standard use of the combustion turbines and duct burners is to provide electrical power for campus operation and steam for building heating and cooling.

5. Other small heating equipment: the standard use of other small heating equipment is to provide for building heating and hot water.

6. Chiller engines/Chillers: the standard use of the non-emergency engines is to provide chilled water for cooling various buildings on campus.

**Alternative Operating Scenario**

There are no alternative operating scenarios.

## Section III: Applicable Requirements and Compliance Demonstration

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

### A. GROUPED EMISSIONS UNIT 1 (GEU-1): Emergency Engines

**EU-54:** 2.63 MMBtu/hr Kohler diesel fired emergency engine – Commissary Warehouse
**EU-567:** 1.14 MMBtu/hr Detroit diesel fired emergency engine – North Campus Parking Garage
**EU-576:** 1.47 MMBtu/hr Kohler diesel fired emergency fire pump engine – Field House
**EU-607:** 2.88 MMBtu/hr Cummins natural gas fired emergency engine – Towers Dorms

**Classification:**

- Emergency engines operating under RCSA §22a-174-3b(e)
- Subject to 40 CFR Part 63 Subpart ZZZZ
- *Not subject to RCSA §22a-174-22e*

**1. Exemption from Permitting for Construction and Operation of Emergency Engines** [STATE ONLY REQUIREMENT]

*a. Limitation or Restriction*

i. The Permittee shall operate each engine as an emergency engine as defined in RCSA §22a-174-22e. [RCSA §§22a-174-3b and 22a-174-33(j)(1)(K)(ii)]

ii. The Permittee shall not allow any of the emergency engines to operate except during periods of testing and scheduled maintenance or during an emergency and unless the following conditions are met: [RCSA §§22a-174-3b(e)(2)(A) and (B)]

(A) Each emergency engine shall not exceed 300 hours during any 12 month rolling aggregate; and

(B) Any non-gaseous fuel consumed by each engine shall comply with the fuel sulfur content requirements of RCSA §22a-174-19b(d)(2).

*b. Monitoring and Testing Requirements*

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

*c. Record Keeping Requirements*

i. The Permittee shall make and keep the following records:

(A) Hours of operation for each month and each 12 month rolling aggregate. [RCSA §22a-174-3b(e)(4)]

(B) Records specified in RCSA §22a-174-19b(g)(3). [RCSA §22a-174-3b(h)]

ii. All records above shall be maintained for a period of five years and made available to the commissioner to inspect and copy upon request. [RCSA §22a-174-3b(e)(3)]

*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. 40 CFR Part 63 Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**Classification:**

- Engine Category: Institutional Emergency
- Each emergency engine is an existing stationary engine located at an Area Source of HAPs, constructed before June 12, 2006.
- Compression ignition engines (CI): EU-54 (370 hp) and 567 (168 hp)
- Compression ignition fire pump: EU-576 (250 hp)
- Spark ignition engine (SI): EU-607 (383 hp)
- The emergency engines are not contractually obligated to be used in Emergency Demand Response (EDR) or for local reliability criteria per 40 CFR §63.6585(f).

*a. Limitation or Restriction*

i. The existing institutional emergency stationary RICE shall not be used to supply power as part of a financial arrangement with another entity. [40 CFR §63.6585(f)(3)]

ii. The Permittee may operate the emergency stationary RICE for a maximum of 100 hours per calendar year as follows: [40 CFR §63.6640(f)(2)(i)]

(A) 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 Permittee 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 Permittee maintains records indicating that federal, state, or local standards require maintenance and testing of the emergency engine beyond 100 hours per calendar year.

*b. Monitoring and Testing Requirements*

Record keeping specified in Section III.A.2.c of this Title V permit shall be sufficient to meet Monitoring and Testing requirements. [RCSA §22a-174-33(j)(1)(K)(ii)]

*c. Record Keeping Requirements*

The Permittee must keep records of the operation of each engine that is recorded through the non-resettable hour meter. The Permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for maintenance checks and readiness testing. [RCSA §22a-174-33(j)(1)(K)(ii)]

*d. Reporting Requirements*

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

## Section III: Applicable Requirements and Compliance Demonstration

### B. GROUPED EMISSIONS UNIT 2 (GEU-2): Emergency Engines

**EU-55:** 5.38 MMBtu/hr Caterpillar diesel fired emergency engine – Thomas J. Dodd Research Center
**EU-565**: 12 MMBtu/hr Mitsubishi diesel fired emergency engine No. 1 – Central Utility Plant
**EU-566:** 12 MMBtu/hr Mitsubishi diesel fired emergency engine No. 2 – Central Utility Plant
**EU-568:** 4.05 MMBtu/hr Cummins natural gas fired emergency engine – Ag Biotech Building
**EU-579:** 5.06 MMBtu/hr Kohler diesel fired emergency engine – South Campus Chiller Plant
**EU-598:** 14.88 MMBtu/hr Caterpillar diesel fired black start emergency engine – Central Utility Plant

**Classification:**

- Emergency engines operating under RCSA §22a-174-3b©
- Subject to RCSA §22a-174-22e
- Subject to 40 CFR Part 63 Subpart ZZZZ

**1. Exemption from Permitting for Construction and Operation of Emergency Engines** [STATE ONLY REQUIREMENTS]

*a. Limitation or Restriction*

i. The Permittee shall operate each operate each engine as an emergency engine as defined in RCSA §22a-174-22e. [RCSA §§22a-174-3b and 22a-174-33(j)(1)(K)(ii)]

ii. The Permittee shall not allow any of the emergency engines to operate except during periods of testing and scheduled maintenance or during an emergency and unless the following conditions are met: [RCSA §22a-174-3b(e)(2)(A) and (B)]

(A) Each emergency engine shall not exceed of 300 hours during any 12-month rolling aggregate; and

(B) Any non-gaseous fuel consumed by each engine shall comply with the fuel sulfur content requirements of RCSA §22a-174-19b(d)(2).

*b. Monitoring and Testing Requirements*

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

*c. Record Keeping Requirements*

i. The Permittee shall make and keep the following records:

(A) Hours of operation for each month and each 12-month rolling aggregate. [RCSA §22a-174-3b(c)(4)]

(B) Records sufficient to demonstrate the sulfur content of fuel used, are those records specified in RCSA §22a-174-19b(g)(3). [RCSA §§22a-174-3b(h)]

ii. All records above shall be maintained for a period of five years and made available to the commissioner to inspect and copy upon request. [RCSA §22a-174-3b(c)(3)]

*d. Reporting Requirements*

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

**2. NOx: RCSA §22a-174-22e**

*a. Limitation or Restriction*

The Permittee shall not operate any emergency engine in GEU-2 for routine scheduled testing or maintenance on any day for which the commissioner has forecast that ozone levels will be "Moderate to Unhealthy for Sensitive Groups" or greater. If, subsequent to the initial forecast of "Moderate to Unhealthy for Sensitive Groups" or greater, the forecast is revised to "Moderate" or lower, the Permittee is no longer prohibited from operating each engine for routine, schedule testing or maintenance for the remainder of that day. The Permittee may rely on an ozone forecast of "Moderate" or lower obtained after 3 P.M. on the preceding day. Subsequent changes to the ozone forecast after 3 P.M. that forecast ozone levels of "Moderate to Unhealthy for Sensitive Groups" or greater shall not obligate the Permittee to refrain from operation of each emergency engine on the following day. [RCSA §22a-174-22e(d)(14)]

*b. Monitoring and Testing Requirements*

Record keeping specified in Section III.B.2.c of this Title V permit shall be sufficient to meet Monitoring and Testing Requirements. [RCSA §22a-174-33(j)(1)(K)(ii)]

*c. Record Keeping Requirements*

i. The Permittee shall make and keep the following records:

(A) The date and work performed for repairs, replacement of parts and other maintenance. [RCSA §22a-174-22e(j)(2)(B)]

(B) Copies of all documents submitted to the commissioner pursuant to RCSA §22a-174-22e. [RCSA §22a-174-22e(j)(2)(F)]

(C) 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)]

ii. 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 and reports shall be retained at the premises where each 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*

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 date specified by the commissioner, whichever is earlier. [RCSA §22a-174-22e(j)(1)]

**3. 40 CFR Part 63 Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**Classification**

- Engine category: Institutional Emergency
- Each emergency engine is an existing stationary engine located at an area source of HAPs, constructed before June 12, 2006
- Compression ignition engines (CI): 55 (749 hp), 565 (1,881 hp), 566 (1,881 hp), 579 (760 hp), 598 (2,172 hp)
- Spark ignition engine (SI): 568 (531 hp)
- The emergency engines are not contractually obligated to be used in Emergency Demand Response (EDR) for local reliability criteria per 40 CFR §63.6585(f).

*a. Limitation or Restriction*

i. The existing institutional emergency stationary RICE shall not be used to supply power as part of a financial arrangement with another entity. [40 CFR §63.6585(f)(3)]

ii. The Permittee may operate the emergency stationary RICE for a maximum of 100 hours per calendar year as follows: [40 CFR §63.66409(f)(2)(i)]

(A) 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 Permittee 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 Permittee maintains records indicating that federal, state, or local standards require maintenance and testing of the emergency engine beyond 100 hours per calendar year.

*b. Monitoring and Testing Requirements*

Record keeping specified in Section III.B.3.c of this Title V permit shall be sufficient to meet Monitoring and Testing Requirements. [RCSA §22a-174-33(j)(1)(K)(ii)]

*c. Record Keeping Requirements*

The Permittee must keep records of the operation of each engine that is recorded through the non-resettable hour meter. The Permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for maintenance checks and readiness testing. [RCSA §22a-174-33(j)(1)(K)(ii)]

*d. Reporting Requirements*

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

## Section III: Applicable Requirements and Compliance Demonstration

### C. GROUPED EMISSIONS UNIT 7 (GEU-7): Combustion Turbines with Duct Burners

**EU-600, 601, 602:** Three – 7 MW Solar Taurus Model 70 combustion turbines with 60 MMBtu/hr duct burners – Central Utility Plant

**Classification:**

- Operating under Permit Nos. 098-0056, 098-0061, 098-0062
- Subject to RCSA §22a-174-22e
- Subject to 40 CFR Part 60 Subparts Dc (duct burners) and GG (turbines)

#### 1. Fuel Type and Consumption, Sulfur Content in Fuel Oil and Natural Gas, Continuous Emission Monitoring Requirements

*a. Limitation or Restriction*

i. Fuel Type: [P 098-0056, P 098-0061, P 098-0062]

(A) Combustion turbines: the Permittee shall only burn No. 2 fuel oil or natural gas.

(B) Duct burners: the Permittee shall only burn natural gas.

ii. Maximum Fuel Consumption: [P 098-0056, P 098-0061, P 098-0062]

(A) Combustion turbines:

(1) No. 2 fuel oil: total of 2,781,900 gallons over any consecutive 12-month period for EU-600, EU-601 and EU-602, combined.

(2) Natural gas: total of 2,089.37 MMcf – [(0.079504 MMcf/hr) x (Operating Hours Firing Oil)] over any consecutive 12-month period for EU-600, EU-601 and EU-602 combined.

(B) Duct burners: total of 1,410.54 MMcf over any consecutive 12-month period for EU-600, EU-601 and EU-602, combined.

iii. Sulfur Content in Fuel Oil and Natural Gas

(A) The sulfur content in the fuel shall not exceed 15 ppm by weight. [RCSA §22a-174-19(b)]

(B) Combustion turbines and duct burners: natural gas: maximum sulfur content shall not exceed 20.0 grains/100 scf. [40 CFR §60.331]

iv. Continuous Emission Monitoring Requirements [P 098-0056, P 098-0061, P 098-0062]

(A) Combustion turbines:

(1) Operational Parameter: fuel flow to each turbine

(2) Averaging times: continuous

(B) Duct burners:

(1) Operational Parameter: fuel flow to each duct burner

(2) Averaging times: continuous

*b. Monitoring and Testing Requirements*

i. The Permittee shall install fuel-metering devices to continuously monitor fuel flow to each turbine and duct burner. [P 098-0056, P 098-0061, P 098-0062]

ii. The Permittee shall operate the turbine and duct burner using good combustion practices. [P 098-0056, P 098-0061, P 098-0062]

iii. The Permittee shall comply with the requirements of RCSA §22a-174-4a, Source Monitoring, Record Keeping and Reporting. [P 098-0056, P 098-0061, P 098-0062, RCSA §22a-174-33(j)(1)(K)]

*c. Record Keeping Requirements*

i. The Permittee shall keep records of annual fuel consumption for each turbine and each duct burner separately. 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. [P 098-0056, P 098-0061, P 098-0062]

ii. The Permittee shall keep records of the fuel certification for each delivery of fuel from a bulk petroleum provider or a copy of the current contract with the fuel supplier supplying the fuel used by the equipment that includes the applicable sulfur content of the fuel as a condition of each shipment. The shipping receipt or contract shall include the date of delivery, the name of the fuel supplier, type of fuel delivered, the percentage of sulfur in such fuel, by weight, dry basis, and the method used to determine the sulfur content of such fuel. [P 098-0056, P 098-0061, P 098-0062]

iii. The Permittee shall keep records of the amount of natural gas combusted during each day in each duct burner. [40 CFR Part 60 Subpart Dc]

iv. The Permittee shall keep records of a current valid purchase contract, tariff sheet, or transportation contract which demonstrates the maximum total sulfur content of the natural gas burned in the combustion turbines. [40 CFR Part 60 Subpart GG]

v. The Permittee shall keep records on premises indicating continual compliance with all above conditions at all times and shall make them available upon request by the commissioner for the duration of Permit Nos. 098-0056, 098-0061, 098-0062, or for the previous five years, whichever is less. [P 098-0056, P 098-0061, P 098-0062]

*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. Hours of Operation**

*a. Limitation or Restriction*

Combustion turbines: No. 2 fuel oil: total of 4,500 hours over any consecutive 12-month period for EU-600, EU-601 and EU-602 combined. [P 098-0056, P 098-0061, P 098-0062]

*b. Monitoring and Testing Requirements*

Record keeping specified in Section III.C.2.c of this Title V permit shall be sufficient to meet 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 keep records of the annual operating hours of the combustion turbine for operations firing No. 2 fuel oil. Operating hours shall be recorded to the nearest 0.1 hour. The annual operating hours firing oil shall be based on any consecutive 12-month time period and shall be determined by adding the current month's operating hours firing oil to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month. [P 098-0056, P 098-0061, P 098-0062]

ii. The Permittee shall keep records on premises indicating continual compliance with all above conditions at all times and shall make them available upon request by the commissioner for the duration of Permit Nos. 098-0056, 098-0061, 098-0062, or for the previous five years, whichever is less. [P 098-0056, P 098-0061, P 098-0062]

*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)]

**3. $PM/PM_{10}$, SOx, VOC, CO, Pb, Ammonia**

*a. Limitation or Restriction*

The Permittee shall not exceed the emission limits stated herein at any time, as determined in accordance with the applicable limitations or restrictions in Section III.C.1 of this Title V permit or as specified in an approved stack test protocol, except during periods of start-up, shutdown, and/or malfunction.

i. $PM/PM_{10}$: [P 098-0056, P 098-0061, P 098-0062]

(A) Natural gas: combustion turbines: Emissions of $PM/PM_{10}$ shall not exceed 2.10 lb/hr for each combustion turbine.

(B) No. 2 fuel oil: combustión turbines:

(1) Emissions of $PM/PM_{10}$ shall not exceed 3.00 lb/hr for each combustion turbine.

(2) Emissions of $PM/PM_{10}$ shall not exceed 6.75 TPY for EU-600, EU-601 and EU-602 combined.

(C) Natural gas: duct burners: Emissions of $PM/PM_{10}$ shall not exceed 0.44 lb/hr for each duct burner.

(D) Total Allowable Emissions for three combustion turbines and three duct burners: Emissions of $PM/PM_{10}$ shall not exceed 34.98 TPY for EU-600, EU-601 and EU-602.

ii. SOx: [P 098-0056, P 098-0061, P 098-0062]

(A) Natural gas: combustion turbines: Emissions of SOx shall not exceed 0.32 lb/hr for each combustion turbine.

(B) No. 2 fuel oil: combustion turbines:

(1) Emissions of SOx shall not exceed 4.32 lb/hr for each combustion turbine.

(2) Emissions of SOx shall not exceed 9.73 TPY for EU-600, EU-601 and EU-602 combined.

(C) Natural gas: duct burners: Emissions of SOx shall not exceed 0.04 lb/hr for each duct burner.

(D) Total Allowable Emissions for three combustion turbines and three duct burners: Emissions of SOx shall not exceed 13.17 TPY for EU-600, EU-601 and EU-602.

iii. VOC: [P 098-0056, P 098-0061, P 098-0062]

(A) Natural gas: combustion turbines: Emissions of VOC shall not exceed 0.33 lb/hr for each combustion turbine.

(B) No. 2 fuel oil: combustion turbines:

(1) Emissions of VOC shall not exceed 5.41 lb/hr for each combustion turbine.

(2) Emissions of VOC shall not exceed 12.18 TPY for EU-600, EU-601 and EU-602 combined.

(C) Natural gas: duct burners: Emissions of VOC shall not exceed 0.18 lb/hr for each duct burner.

(D) Total Allowable Emissions for three combustion turbines and three duct burners: Emissions of VOC shall not exceed 17.38 TPY for EU-600, EU-601 and EU-602.

iv. CO: [P 098-0056, P 098-0061, P 098-0062]

(A) Natural gas: combustion turbines: Emissions of CO shall not exceed 2.08 lb/hr and 10 ppmvd at 15% $O_2$ for each combustion turbine.

(B) No. 2 fuel oil: combustion turbines:

(1) Emissions of CO while operating at 80-100% load shall not exceed 10 ppmvd at 15% $O_2$ for each combustion turbine.

(2) Emissions of CO while operating at 55-79.9% load shall not exceed 20 ppmvd at 15% $O_2$ for each combustion turbine.

(3) Emissions of CO shall not exceed 3.44 lb/hr for each combustion turbine.

(4) Emissions of CO shall not exceed 7.73 TPY for EU-600, EU-601 and EU-602 combined.

(C) Natural gas: duct burners: Emissions of CO shall not exceed 0.98 lb/hr for each duct burner.

(D) Total Allowable Emissions for three combustion turbines and three duct burners: Emissions of CO shall not exceed 39.03 TPY for EU-600, EU-601 and EU-602.

v. Pb: [P 098-0056, P 098-0061, P 098-0062]

(A) No. 2 fuel oil: combustion turbines:

(1) Emissions of Pb shall not exceed 1.20E-03 lb/hr for each combustion turbine.

(2) Emissions of Pb shall not exceed 2.70E-03 TPY for EU-600, EU-601 and EU-602 combined.

(B) Natural gas: duct burners: Emissions of Pb shall not exceed 2.92E-05 lb/hr for each duct burner.

(C) Total Allowable Emissions for three combustion turbines and three duct burners: Emissions of Pb shall not exceed 3.05E-03 TPY for EU-600, EU-601 and EU-602 combined.

vi. Ammonia: [P 098-0056, P 098-0061, P 098-0062]
Emissions of Ammonia shall not exceed 10 ppmvd at 15% $O_2$.

vii. The Permittee shall demonstrate compliance with the allowable emission limits in this Title V permit by calculating the emission rates using emission factors from the following sources:
[P 098-0056, P 098-0061, P 098-0062]

(A) Duct Burner Emissions: AP-42 – 5th Edition (7/98)

(1) CO: 84 lb/MMcf – Section 1.4, Table 1.4-1

(2) VOC: 5.5 lb/MMcf – Section 1.4, Table 1.4-2

(3) SOx: 0.6 lb/MMcf – Section 1.4, Table 1.4-2

(4) PM/$PM_{10}$: 7.6 lb/MMcf – Section 1.4, Table 1.4-2

(B) Uncontrolled Turbine Emissions (Natural Gas) @ 50-100% load: Solar Turbines

(1) CO: 10.40 lb/hr, 50 ppmvd@15% $O_2$

(2) VOC: 0.60 lb/hr, 25 ppmvd@15% $O_2$

(3) SOx: 3.4E-3 lb/MMBtu – AP42 Section 3.1, Table 3.1-2a, 5th Edition (4/00)

(4) PM/$PM_{10}$: 2.10 lb/hr

(C) Uncontrolled Turbine Emissions (No. 2 Fuel Oil) @ 55-79.9% load: Solar Turbines

(1) CO: 17.18 lb/hr, 100 ppmvd@15% $O_2$

(2) VOC: 9.84 lb/hr, 100 ppmvd@15% $O_2$

(3) SOx: 0.0505 lb/MMBtu – AP42 Section 3.1, Table 3.1-2a, 5th Edition (4/00)

(4) $PM/PM_{10}$: 2.55 lb/hr

(5) Pb: 1.4E-05 lb/MMBtu – AP42 Section 3.1, Table 3.1-5, 5th Edition (4/00)

(D) Uncontrolled Turbine Emissions (No. 2 Fuel Oil) @ 80-100% load: Solar Turbines

(1) CO: 10.13 lb/hr, 96 ppmvd@15% $O_2$

(2) VOC: 2.90 lb/hr, 25 ppmvd@15% $O_2$

(3) SOx: 0.0505 lb/MMBtu – AP42 Section 3.1, Table 3.1-2a, 5th Edition (4/00)

(4) $PM/PM_{10}$: 3.00 lb/hr

(5) Pb: 1.4E-05 lb/MMBtu – AP42 Section 3.1, Table 3.1-5, 5th Edition (4/00)

The above statement shall not preclude the commissioner from requiring other means (e.g., stack testing) to demonstrate compliance with the above emission limits, as allowed by state or federal statute, law or regulations.

*b. Monitoring and Testing Requirements*

i. The Permittee shall conduct recurrent stack testing for CO, $PM_{10}$ and Ammonia within five years from the previous stack test to demonstrate compliance with the limits in Section III.C.3.a of this Title V permit. [P 098-0056, P 098-0061, P 098-0062]

ii. The Permittee shall conduct stack testing for all fuels and for combined operations of each turbine and duct burner to show compliance with the limits in Section III.C.3.a of this Title V permit. [P 098-0056, P 098-0061, P 098-0062]

*c. Record Keeping Requirements*

i. The Permittee shall keep records of $PM/PM_{10}$, SOx, VOC, CO, Pb, Ammonia and Formaldehyde annual emissions. Annual emissions shall be based on any consecutive 12-month time period and shall be determined by adding the current month's emissions to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month. [P 098-0056, P 098-0061, P 098-0062]

ii. The Permittee shall maintain a current EO&M Plan on-site and shall update it on a yearly basis and kept on site. The EO&M Plan shall apply to all equipment covered by Permit Nos. 098-0056, 098-0061 and 098-0062 and shall include, but not limited to, consideration of: maintenance of spare parts, start-up/shut-down provisions, procedures, protocols, and methodologies for demonstrating continuous compliance with applicable emission limitations. Any revision to this plan which conflicts or may conflict with any condition of Permit Nos. 098-0056, 098-0061 and 098-0062 shall be reviewed by the commissioner and shall receive the commissioner's written approval prior to such revision. [P 098-0056, P 098-0061, P 098-0062]

iii. The Permittee shall keep records on premises indicating continual compliance with all above conditions at all times and shall make them available upon request by the commissioner for the duration of Permit Nos. 098-0056, 098-0061, 098-0062, or for the previous five years, whichever is less. [P 098-0056, P 098-0061, P 098-0062]

*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)]

**4. NOx**

*a. Limitation or Restriction*

i. The Permittee shall not exceed the emission limits stated herein at any time, as determined in accordance with the applicable limitations or restrictions in Section III.C.1 of this Title V permit or as specified in an approved stack test protocol, except during periods of start-up, shutdown, and/or malfunction. [P 098-0056, P 098-0061, P 098-0062]

(A) Natural gas: combustion turbine: Emissions of NOx shall not exceed 0.85 lb/hr and 2.5 ppmvd at 15% $O_2$ for each combustion turbine.

(B) No. 2 fuel oil: combustion turbines:

(1) Emissions of NOx operating at 80-100% load shall not exceed 9.6 ppmvd at 15% $O_2$ for each combustion turbine.

(2) Emissions of NOx operating at 55-79.9% load shall not exceed 12 ppmvd at 15% O2 for each combustion turbine.

(3) Emissions of NOx shall not exceed 3.25 lb/hr for each combustion turbine.

(4) Emissions of NOx shall not exceed 7.31 TPY for EU-600, EU-601 and EU-602 combined.

(5) Natural gas: duct burners: Emissions of NOx shall not exceed 0.58 lb/hr for each duct burner.

(6) Total Allowable Emissions for three combustion turbines and three duct burners: Emissions of NOx shall not exceed 22.35 TPY for EU-600, EU-601 and EU-602.

ii. The Permittee shall not cause or allow an emission unit to exceed the following as determined by NOx emission testing pursuant to RCSA §22a-174-22e(l):
[RCSA §22a-174-22e(d)(5)(C)]

(A) Phase II (Beginning June 1, 2023 and continuing thereafter)

Natural Gas: 25 ppmvd

No. 2 fuel Oil: 42 ppmvd

iii. The Permittee shall not cause or allow an emission unit to exceed the applicable emissions limitations specified in Section III.C.4.a.ii(A) 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).

iv. The Permittee shall not cause or allow emissions of NOx from the units in GEU 7 in excess of the following: [RCSA §§22a-174-22e(d)(10)(A)(i through iii)]

(A) For fuel-burning equipment that simultaneously fires two or more fuels, an emissions limitation calculated by:

(1) Multiplying the heat input of each fuel combusted by the emission limitation in Part III.C.4 of this Title V permit for the particular emission unit and fuel used,
(2) Summing those products, and
(3) Dividing the sum by the total heat input.

*b. Monitoring and Testing Requirements*

i. The Permittee shall conduct recurrent stack testing for NOx within five years from the previous stack test to show compliance with the limits in Section III.C.4.a of this Title V permit. [P 098-0056, P 098-0061, P 098-0062]

ii. The Permittee shall conduct stack testing for all fuels and for combined operations of the turbine and duct burner to show compliance with the limits in Section III.C.4.a of this Title V permit. [P 098-0056, P 098-0061, P 098-0062]

iii. The Permittee shall operate and maintain this equipment in accordance with the manufacturer's specifications and written recommendations. [P 098-0056, P 098-0061, P 098-0062]

iv. The Permittee shall comply with the requirements of RCSA §22a-174-4a, Source Monitoring, Record Keeping and Reporting. [P 098-0056, P 098-0061, P 098-0062, RCSA §22a-174-33(j)(1)(K)]

v. The Permittee of an existing emission unit subject to RCSA §22a-174-22e shall conduct recurrent emission tests within every 63 calendar months following the date that the previous emission test was conducted or the date the previous emission test was required to be conducted, whichever is earlier. [RCSA §22a-174-22e(l)(5)]

*c. Record Keeping Requirements*

i. The Permittee shall keep records of NOx annual emissions. Annual emissions shall be based on any consecutive 12-month time period and shall be determined by adding the current month's emissions to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month. [P 098-0056, P 098-0061, P 098-0062]

ii. The Permittee shall demonstrate compliance with emission limits for the combustion turbines and duct burners by calculating the emission rates using emission factors provided by the combustion turbine manufacturer or from AP-42. This shall not preclude the commissioner from requiring other means (e.g. stack testing) to demonstrate compliance with the above emission limits, as allowed by state or federal statute, law or regulation. [P 098-0056, P 098-0061, P 098-0062]

iii. The Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction of the operation of the combustion turbines or duct burners. The Permittee shall also maintain records of the malfunction of any air pollution control equipment or any periods during which a continuous monitoring system or monitoring device is inoperative. [40 CFR Part 60 Subpart A]

iv. The Permittee shall make and 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 make and keep records of the dates and times of all emission testing required by RCSA §22a-174-22e, the persons performing the measurement, the testing method 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 make and keep copies of all documents submitted to the commissioner pursuant to RCSA §22a-174-22e. [RCSA §22a-174-22e(j)(2)(F)]

vii. The Permittee shall keep records on premises indicating continual compliance at all times and shall make them available upon request by the commissioner for the duration of Permit Nos. 098-0056, 098-0061, 098-0062, or for the previous five years, whichever is less.
[P 098-0056, P 098-0061, P 098-0062, RCSA §22a-174-22e(j)(1)]

*d. Reporting Requirements*

i. The Permittee shall submit and maintain an updated standby plan pursuant to RCSA §22a-174-6, "Air Pollution" emergency episode procedures. [P 098-0056, P 098-0061, P 098-0062]

ii. The Permittee shall submit a written report of the results of stack testing conducted in accordance with Section III.C.4.b of this Title V permit to the commissioner not later than 60 days after completion of the testing. [RCSA §22a-174-22e(k)(1)]

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)]

**5. Control Equipment**

*a. Limitation or Restriction*

i. The Permittee shall use Selective Catalytic Reduction, Dry Low NOx Combustor and Oxidation Catalyst to achieve emissions limits in Section III.C of this Title V permit.
[P 098-0056, P 098-0061, P 098-0062]

ii. The Permittee shall comply with the requirements of RCSA §22a-174-7.
[P 098-0056, P 098-0061, P 098-0062]

*b. Monitoring and Testing Requirements*

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

*c. Record Keeping Requirements*

The Permittee shall maintain records sufficient to determine compliance with the limitation or restriction in Section III.C.5.a of this Title V permit. [RCSA §22a-174-33(j)(1)(K)]

*d. Reporting Requirements*

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

## D. GROUPED EMISSIONS UNIT 8 (GEU-8): Small Boilers and Heating Equipment

Small boilers and heating equipment operating under collateral conditions in Permit Nos. 098-0056, 098-0061, 098-0062

- **Subgroup 1:** Nine Laars RHEOS+ Model 1600 and three Laars RHEOS+ Model 2000 natural gas fired boilers or equivalent – Hilltop Apartments
- **Subgroup 2:** All natural gas fired heating equipment – Charter Oak Apartments and Suites, Husky Village, Hilltop Apartments Community Center (2353 Alumni Drive), and Hilltop Apartments Building No. 22 (22 Husky Circle)
- **Subgroup 3:** All natural gas fired heating equipment – Hilltop Suites

Small boilers and heating equipment operating under collateral conditions in Permit No. 098-0026

- **Subgroup 4:** All natural gas fired heating equipment – Next Generation Connecticut Hall
- **Subgroup 5:** All natural gas fired heating equipment – Northwood Apartments
- **Subgroup 6:** All natural gas fired heating equipment – Innovation Partnership Building

### 1. Fuel Consumption

*a. Limitation or Restriction*

i. Total natural gas consumption over any consecutive 12-month period shall not exceed the following:

(A) Subgroup 1: 536,112 ccf [P 098-0056, P 098-0061, P 098-0062]

(B) Subgroup 2: 689,482 ccf [P 098-0056, P 098-0061, P 098-0062]

(C) Subgroup 3: 142,700 ccf [P 098-0056, P 098-0061, P 098-0062]

(D) Subgroup 4: 28,905,372 $ft^3$ [P 098-0026]

(E) Subgroup 5: 39,104,640 $ft^3$ [P 098-0026]

(F) Subgroup 6: 70,693,200 $ft^3$ [P 098-0026]

*b. Monitoring and Testing Requirements*

The Permittee shall monitor total monthly and total consecutive 12-month fuel consumption for each subgroup listed above. [P 098-0056, P 098-0061, P 098-0062, P 098-0026]

*c. Record Keeping Requirements*

i. The Permittee shall keep records of the total monthly and total annual fuel consumption for the equipment at each subgroup listed above. These records shall be obtained from monthly utility billing records. Annual fuel consumption shall be based on the fuel consumption determined from any 12 consecutive months of billing records and shall be calculated by adding the fuel consumption from the current month's billing records to the fuel consumption obtained from the previous 11 months of billing records. The Permittee shall make these calculations within 30 days after the date that each month's billing records become available. [P 098-0056, P 098-0061, P 098-0062, P 098-0026]

ii. The Permittee shall keep records on the premises indicating continual compliance at all times and shall make them available upon request by the commissioner for the duration of the permit, or for the previous five years, whichever is less. [P 098-0056, P 098-0061, P 098-0062, P 098-0026]

*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)]

## E. GROUPED EMISSIONS UNIT 10 (GEU-10): Emergency Engines

**EU-1:** 3.88 MMBtu/hr Kohler No. 2 fuel oil fired emergency engine – Beach Building
**EU-2:** 6.65 MMBtu/hr Kohler No. 2 fuel oil fired emergency engine – School of Psychology
**EU-9:** 4.6 MMBtu/hr Kohler Diesel or No. 2 fuel oil fired emergency engine – Fenton River Well Field
**EU-63:** 4.7 MMBtu/hr Onan Diesel fired emergency engine – Water Pollution Control Facility

**Classification:**

- Emergency engines operating under NSR Permit Nos. 098-0011, 098-0012, 098-0019, 098-0054
- Subject to RCSA §22a-174-22e
- Subject to 40 CFR Part 63 Subpart ZZZZ

### 1. Maximum Hours of Operation

*a. Limitation or Restriction*

i. EU-1, 2, 9: The Permittee shall not exceed 170 hours of operation per engine over any consecutive 12-month period. [P 098-0011, P 098-0012, P 098-0019]

ii. EU-63: The Permittee shall not exceed 500 hours of operation over any consecutive 12-month period. [P 098-0054]

iii. The Permittee shall operate each engine as an emergency engine as defined in RCSA 22a-174-22e. [RCSA §§22a-174-22e and 22a-174-33(j)(1)(K)(ii)]

*b. Monitoring and Testing Requirements*

The Permittee shall monitor annual operating hours for each engine.
[P 098-0011, P 098-0012, P 098-0019, P 098-0054]

*c. Record Keeping Requirements*

i. The Permittee shall keep records of monthly and annual operating hours for each engine. Annual operating hours shall be based on any 12 consecutive month period and shall be determined by adding the current month's operating hours to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month.
[P 098-0011, P 098-0012, P 098-0019, P 098-0054]

ii. The Permittee shall keep records on premises indicating continual compliance with all above conditions at all times and shall make them available upon request by the commissioner for the duration of the permits, or for the previous five years, whichever is less.
[P 098-0011, P 098-0012, P 098-0019, P 098-0054]

*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. Fuel Type and Fuel Sulfur Content**

*a. Limitation or Restriction*

i. Fuel Type

(A) The Permittee shall burn No. 2 fuel or diesel fuel oil in each emergency engine.
[P 098-0011, P 098-0012, P 098-0019, P 098-0054]

ii. Fuel Sulfur Content

The sulfur content in the fuel used in these emergency engines shall not exceed 15 ppm by weight.
[RCSA §22a-174-19b(d)]

*b. Monitoring and Testing Requirements*

Record keeping specified in Section III.E.2.c of this Title V permit shall be sufficient to meet 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 keep records of the fuel certification for each delivery of fuel to each engine from a bulk petroleum provider or a copy of the current contract with the fuel supplier supplying the fuel used by the equipment that includes the applicable sulfur content of the fuel as a condition of each shipment. The shipping receipt or contract shall include the date of delivery, the name of the fuel supplier, type of fuel delivered, the percentage of sulfur in such fuel, by weight, dry basis, and the method used to determine the sulfur content of such fuel.
[P 098-0012, P 098-0054, RCSA §22a-174-33(j)(1)(K)(ii)]

ii. The Permittee shall keep records on premises indicating continual compliance with all above conditions at all times and shall make them available upon request by the commissioner for the duration of the permits, or for the previous five years, whichever is less.
[P 098-0011, P 098-0012, P 098-0019, P 098-0054]

*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)]

**3. TSP/$PM_{10}$, SOx, NOx, VOC, CO**

*a. Limitation or Restriction*

i. The Permittee shall operate each engine as an emergency engine as defined in RCSA §22a-174-22e. [RCSA §§22a-174-22e and 22a-174-33(j)(1)(K)(ii)]

ii. TSP/$PM_{10}$:

(A) EU-1: emissions shall not exceed 0.10 lb/MMBtu, 0.10 TPY. [P 098-0011]

(B) EU-2: emissions shall not exceed 0.10 lb/MMBtu, 0.06 TPY. [P 098-0012]

(C) EU-9: emissions shall not exceed 0.10 lb/MMBtu, 0.04 TPY. [P 098-0019]

(D) EU-63: emissions shall not exceed 0.10 lb/MMBtu, 0.12 TPY. [P 098-0054]

iii. SOx:

(A) EU-1: emissions shall not exceed 0.30 lb/MMBtu, 0.10 TPY. [P 098-0011]

(B) EU-2: emissions shall not exceed 0.05 lb/MMBtu, 0.03 TPY. [P 098-0012]

(C) EU-9: emissions shall not exceed 0.30 lb/MMBtu, 0.12 TPY. [P 098-0019]

(D) EU-63: emissions shall not exceed 0.05 lb/MMBtu, 0.06 TPY. [P 098-0054]

iv. NOx:

(A) EU-1: emissions shall not exceed 4.41 lb/MMBtu, 1.45 TPY. [P 098-0011]

(B) EU-2: emissions shall not exceed 3.20 lb/MMBtu, 1.81 TPY. [P 098-0012]

(C) EU-9: emissions shall not exceed 3.20 lb/MMBtu, 1.25 TPY. [P 098-0019]

(D) EU-63: emissions shall not exceed 3.20 lb/MMBtu, 3.76 TPY. [P 098-0054]

v. VOC:

(A) EU-1: emissions shall not exceed 0.36 lb/MMBtu, 0.12 TPY. [P 098-0011]

(B) EU-2: emissions shall not exceed 0.09 lb/MMBtu, 0.05 TPY. [P 098-0012]

(C) EU-9: emissions shall not exceed 0.09 lb/MMBtu, 0.04 TPY. [P 098-0019]

(D) EU-63: emissions shall not exceed 0.09 lb/MMBtu, 0.11 TPY. [P 098-0054]

vi. CO:

(A) EU-1: emissions shall not exceed 0.95 lb/MMBtu, 0.31 TPY. [P 098-0011]

(B) EU-2: emissions shall not exceed 0.85 lb/MMBtu, 0.48 TPY. [P 098-0012]

(C) EU-9: emissions shall not exceed 0.85 lb/MMBtu, 0.33 TPY. [P 098-0019]

(D) EU-63: emissions shall not exceed 0.85 lb/MMBtu, 1.00 TPY. [P 098-0054]

*b. Monitoring and Testing Requirements*

Record keeping specified in Section III.E.3.c of this Title V permit shall be sufficient to meet 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 calculate emissions using emission factors from AP-42 and SOx: CT DEEP Memorandum 05/23/1991. [P 098-0011, P 098-0012, P 098-0019, P 098-0054]

ii. The Permittee shall keep records on premises indicating continual compliance with all above conditions at all times and shall make them available upon request by the commissioner for the duration of the permits, or for the previous five years, whichever is less.
[P 098-0011, P 098-0012, P 098-0019, P 098-0054]

*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)]

**4. Operational Conditions and Non-Emergency Operation**

*a. Limitation or Restriction*

**Note:** RCSA §22a-174-22e became effective on December 22, 2016 and RCSA §22a-174-22 was repealed on June 1, 2018 which made the related language in the existing NSR permits obsolete. The Permittee will not be required to modify the NSR permits at the time of this Title V renewal (Application No. 202304344).

i. The Permittee of each emergency engine shall not operate the emergency engine for routine, scheduled testing or maintenance on any day for which the commissioner has forecast that ozone levels will be "moderate to unhealthy for sensitive groups" or greater. If, subsequent to the initial forecast of "moderate to unhealthy for sensitive groups" or greater, the forecast is revised to "moderate" or lower, the owner or operator is no longer prohibited from operating the engine for routine, scheduled testing or maintenance for the remainder of that day. An owner or operator of an emergency engine may rely on an ozone forecast of "moderate" or lower obtained after 3 p.m. on the preceding day. Subsequent changes to the ozone forecast after 3 p.m. that forecast ozone levels of "moderate to unhealthy for sensitive groups" or greater shall not obligate the owner or operator to refrain from operation of the emergency engine at the facility on the following day. The commissioner may exempt, by permit or order, the Permittee of an emergency engine from this subdivision if such emergency engine is unattended and the testing is automated and cannot be modified from a remote location. [RCSA §22a-174-22e(d)(14)]

ii. The Permittee shall operate each engine as an emergency engine as defined in RCSA 22a-174-22e. [RCSA §§22a-174-22e and 22a-174-33(j)(1)(K)(ii)]

*b. Monitoring and Testing Requirements*

Record keeping specified in Section III.E.4.c of this Title V permit shall be sufficient to meet Monitoring and Testing Requirements pursuant to RCSA §22a-174-33.
[RCSA §§22a-174-33(j)(1)(K)(ii) and 22a-174-22e(C)(5)]

*c. Record Keeping Requirements*

i. The Permittee shall retain all records and reports produced pursuant to this section 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 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) and 22a-174-33(j)(1)(K)(ii)]

(A) Daily records of operating hours of each engine, identifying the operating hours of emergency and non-emergency use. [P 098-0011, P 098-0012, P 098-0019, P 098-0054]

(B) Records of all tune-ups, repairs, replacement of parts and other maintenance.
[P 098-0011, P 098-0012, P 098-0019, P 098-0054]

(C) The date and work performed for repairs, replacement of parts and other maintenance.
[RCSA §22a-174-22e(j)(2)(B)]

(D) Copies of all documents submitted to the commissioner pursuant to RCSA §22a-174-22e.
[RCSA §22a-174-22e(j)(2)(F)]

(E) 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)]

*d. Reporting Requirements*

The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of the 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. 40 CFR Part 63 Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**Classification:**

- Engine Category: Institutional Emergency
- EU-1 (568 hp), EU-2 (947 hp), EU-9 (643 hp), EU-63 (838 hp)
- Each emergency engine is an existing stationary engine located at an area source of HAPs, constructed before June 2006.
- Compression ignition engines
- The emergency engines meet the definition of emergency stationary RICE in 40 CFR §63.6675 and operate according to the applicable provisions of 40 CFR §63.6640(f).
- The emergency engines are not contractually obligated to be used in Emergency Demand Response (EDR) or for local reliability criteria per 40 CFR §63.6585(f).

*a. Limitation or Restriction*

i. The existing institutional emergency stationary RICE shall not be used to supply power as part of a financial arrangement with another entity. [40 CFR §63.6585(f)(3)]

ii. The Permittee may operate the emergency Stationary RICE for a maximum of 100 hours per calendar year as follows: [40 CFR §63.6640(f)(2)(i)]

(A) 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 Permittee 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)]

*b. Monitoring and Testing Requirements*

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

*c. Record Keeping Requirements*

The Permittee must keep records of the operation of the engine in emergency and non-emergency service through the non-resettable hour meter. The Permittee must record the time of operation of the engine and the reason the engine was in operation during that time. [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)]

## F. GROUPED EMISSIONS UNIT 11 (GEU-11): Emergency Engines

**EU-5:** 1.55 MMBtu/hr Kohler No. 2 fuel oil fired emergency engine – Biobehavioral Building No. 4 Annex
**EU-8:** 2.40 MMBtu/hr Cummins No. 2 fuel oil fired emergency engine – Gampel Pavilion

**Classification:**
- Emergency engines operating under Permit Nos. 098-0015, 098-0018
- Subject to 40 CFR Part 63 Subpart ZZZZ
- *Not subject to RCSA §22a-174-22e*

### 1. Maximum Hours of Operation

*a. Limitation or Restriction*

i. The Permittee shall not operate each emergency engine for more than 170 hours over any consecutive 12-month period. [P 098-0015, P 098-0018]

ii. The Permittee shall operate each engine as an emergency engine as defined in RCSA §22a-174-22e. [RCSA §§22a-174-22e(a) and 22a-174-33(j)(1)(K)(ii)]

*b. Monitoring and Testing Requirements*

The Permittee shall monitor monthly and annual operating hours. [P 098-0015, P 098-0018]

*c. Record Keeping Requirements*

i. The Permittee shall keep records of monthly and annual operating hours for each engine. Annual operating hours shall be based on any 12 consecutive month period and shall be determined by adding the current month's operating hours to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month. [P 098-0015, P 098-0018]

ii. The Permittee shall keep records on premises indicating continual compliance with the permit at all times and shall make them available upon request by the commissioner for the duration of the permits, or the previous five years, whichever is less. [P 098-0015, P 098-0018]

*d. Reporting Requirements*

The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of the 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. Fuel Type and Fuel Sulfur Content**

*a. Limitation or Restriction*

i. The Permittee shall only burn No. 2 fuel oil. [P 098-0015, P 098-0018]

ii. The sulfur content in the fuel shall not exceed 15 ppm by weight. [RCSA §22a-174-19b(d)]

*b. Monitoring and Testing Requirements*

Record keeping specified in Section III.F.2.c of this Title V permit shall be sufficient to meet 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 maintain records of the sulfur content of the fuel combusted and the quantity purchased for combustion. A written certification or a written contract with a fuel supplier is sufficient if the certification or contract identifies: [RCSA §22a-174-19b(g)(3)]

(A) The name of the fuel seller;

(B) The type of fuel purchased;

(C) The sulfur content of the fuel purchased; and

(D) The method used to determine the sulfur content of the fuel purchased.

ii. The Permittee shall keep records on premises indicating continual compliance with the conditions of the

permit at all times and shall make them available upon request by the commissioner for the duration of the permits, or for the previous five years, whichever is less. [P 098-0015, P 098-0018]

*d. Reporting Requirements*

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

**3. TSP/$PM_{10}$, SOx, NOx, VOC and CO**

*a. Limitation or Restriction*

i. TSP/$PM_{10}$:

(A) EU-5: emissions shall not exceed 0.10 lb/MMBtu, 0.04 TPY. [P 098-0015]

(B) EU-8: emissions shall not exceed 0.10 lb/MMBtu, 0.06 TPY. [P 098-0018]

ii. SOx:

(A) EU-5: emissions shall not exceed 0.30 lb/MMBtu, 0.04 TPY. [P 098-0015]

(B) EU-8: emissions shall not exceed 0.30 lb/MMBtu, 0.06 TPY. [P 098-0018]

iii. NOx:

(A) EU-5: emissions shall not exceed 4.41 lb/MMBtu, 0.58 TPY. [P 098-0015]

(B) EU-8: emissions shall not exceed 4.41 lb/MMBtu, 0.90 TPY. [P 098-0018]

iv. VOC:

(A) EU-5: emissions shall not exceed 0.36 lb/MMBtu, 0.05 TPY. [P 098-0015]

(B) EU-8: emissions shall not exceed 0.36 lb/MMBtu, 0.07 TPY. [P 098-0018]

v. CO:

(A) EU-5: emissions shall not exceed 0.95 lb/MMBtu, 0.13 TPY. [P 098-0015]

(B) EU-8: emissions shall not exceed 0.95 lb/MMBtu, 0.19 TPY. [P 098-0018]

*b. Monitoring and Testing Requirements*

Record keeping specified in Section III.F.3.c of this Title V permit shall be sufficient to meet 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 calculate emissions using emission factors from AP-42 and SOx: CT DEEP Memorandum 05/23/1991. [P 098-0015, P 098-0018]

ii. The Permittee shall keep records on the premises indicating continual compliance with all above conditions at all times and shall make them available upon request by the commissioner for the duration of the permits,

or for the previous five years, whichever is less. [P 098-0015, P 098-0018]

*d. Reporting Requirements*

The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of the 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)]

**4. 40 CFR Part 63 Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**Classification:**

- Engine Category: Institutional Emergency
- EU-5 (250 hp), EU-8 (335 hp)
- Each emergency engine is an existing stationary engine located at an area source of HAPs, constructed before June 2006.
- Compression ignition engines
- The emergency engines meet the definition of Emergency Stationary RICE in 40 CFR §63.6675 and operate according to the provisions of 40 CFR §63.6640(f).
- The emergency engines are not contractually obligated to be used in Emergency Demand Response (EDR) or for local reliability criteria per 40 CFR §63.6585(f).

*a. Limitation or Restriction*

i. The existing institutional emergency stationary RICE shall not be used to supply power as part of a financial arrangement with another entity. [40 CFR §63.6585(f)(3)]

ii. The Permittee may operate the emergency stationary RICE for a maximum of 100 hours per calendar year as follows: [40 CFR §63.6640(f)(2)(i)]

(A) 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 Permittee 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)]

*b. Monitoring and Testing Requirements*

Record keeping specified in Section III.F.4.c of this Title V permit shall be sufficient to meet Monitoring and Testing Requirements pursuant to RCSA §22a-174-33. [RCSA §22a-174-33(j)(1)(K)(ii)]

*c. Record Keeping Requirements*

The Permittee must keep records of the operation of each engine that is recorded through the non-resettable hour meter. The Permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for maintenance checks and readiness testing. [RCSA §22a-174-33(j)(1)(K)(ii)]

*d. Reporting Requirements*

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

## G. GROUPED EMISSIONS UNIT 13 (GEU-13): Emergency Engines

**EU-19**: 2.50 MMBtu/hr (285 hp) Onan natural gas fired emergency engine – Biobehavioral Building No. 4
**EU-20**: 0.60 MMBtu/hr (0.60 hp) Onan natural gas fired emergency engine – Ellsworth Hall
**EU-27**: 0.18 MMBtu/hr (25 hp) Onan LPG fired emergency engine – Hollister Hall
**EU-30**: 1.81 MMBtu/hr (220 hp) Marathon LPG fired emergency engine – Facilities Management
**EU-42**: 0.18 MMBtu/hr (25 hp) Onan LPG fired emergency engine – New Fine Arts Building
**EU-48**: 1.2 MMBtu/hr (150 hp) Kohler natural gas fired emergency engine – Whitney Hall
**EU-56**: 2.93 MMBtu/hr (419 hp) Cummins diesel fired emergency engine – Student Health Services
**EU-57**: 2.93 MMBtu/hr (419 hp) Onan diesel fired emergency engine – Institute of Material Science
**EU-59**: 0.29 MMBtu/hr (66 hp) Kohler emergency diesel fired engine – Jorgensen Auditorium
**EU-575**: 0.65 MMBtu/hr (82 hp) Kohler LPG fired emergency engine – Field House
**EU-608**: 0.28 MMBtu/hr (45 hp) Perkins emergency fired pump diesel engine – Ice Rink

**Classification:**

- Engine Category: Institutional Emergency
- Subject to 40 CFR Part 63 Subpart ZZZZ
- *Not subject to RCSA §§22a-174-3a or 22a-174-22e*
- EU-56 and EU-57 were not subject to RCSA §22a-174-3 (Regulations applicable at the time of construction; Construction dates: 1988 and 1970)

### 1. 40 CFR Part 63 Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

**Classification:**

- Engine Category: Institutional emergency
- Each unit is an existing stationary engine located at an Area Source of HAPs, constructed before June 12, 2006.
- Compression ignition engines (CI): EU-19, 56, 57, 59, 608
- Spark ignition engines (SI): EU-20, 27, 30, 42, 48, 575
- The emergency engines meet the definition of Emergency Stationary RICE in 40 CFR §63.6675 and operate according to the provisions of 40 CFR §63.6640(f).
- The emergency engines are not contractually obligated to be used in Emergency Demand Response (EDR) or for local reliability criteria per 40 CFR §63.6585(f).

*a. Limitation or Restriction*

i. The existing institutional emergency stationary RICE shall not be used to supply power as part of a financial arrangement with another entity. [40 CFR §63.6585(f)(3)]

ii. The Permittee must operate the emergency stationary RICE according to the requirements in 40 CFR §63.6640(f). In order for the engines to be considered an emergency stationary RICE under 40 CFR Part 63 Subpart ZZZZ, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR §63.6640(f), is prohibited. If the Permittee does not operate the engines according to the requirements in 40 CFR §63.6640(f), the engines will not be considered emergency engines under 40 CFR Part 63 Subpart ZZZZ and must meet all the

requirements for non-emergency engines. [40 CFR §63.6640(f)]

(A) There is no limit on the use of emergency stationary RICE in emergency situations. [40 CFR §63.6640(f)(1)]

(B) The Permittee may operate the emergency stationary RICE for the purpose specified in 40 CFR §63.6640(f)(2)(i) for a maximum of 100 hours per calendar year. [40 CFR §63.664(f)(2)]

(1) The emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The Permittee 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)]

*b. Monitoring and Testing Requirements*

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

*c. Record Keeping Requirements*

The Permittee must keep records of the operation of the engine in emergency and non-emergency service through the non-resettable hour meter. The Permittee must record the time of operation of the engine and the reason the engine was in operation during that time. [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)]

## H. GROUPED EMISSIONS UNIT 14 (GEU-14): Four TECOCHILL CH-400 Chillers

**EU-1436**: TECOCHILL CH-400 Engine-driven chiller with two 161 hp TecoDrive 7400LE natural gas fired non-emergency engines
**EU-1437**: TECOCHILL CH-400 Engine-driven chiller with two 161 hp TecoDrive 7400LE natural gas fired non-emergency engines
**EU-1438**: TECOCHILL CH-400 Engine-driven chiller with two 161 hp TecoDrive 7400LE natural gas fired non-emergency engines
**EU-1439**: TECOCHILL CH-400 Engine-driven chiller with two 161 hp TecoDrive 7400LE natural gas fired non-emergency engines

**Classification:**

- Non-emergency Spark Ignition Engines
- Not subject to RCSA §22a-174-3a (Each EU)
- Not subject to RCSA §22a-174-22e (Each EU)
- Operating under Collateral Conditions in Permit No. 098-0026
- Subject to 40 CFR Part 60 Subpart JJJJ

- Pursuant to 40 CFR §63.6590(c), EU-1436, EU-1437, EU-1438 and EU-1439 meet the requirements of 40 CFR Part 63 Subpart ZZZZ by complying with 40 CFR Part 60 Subpart JJJJ

**1. Fuel Consumption**

*a. Limitation or Restriction*

Total natural gas consumption over any consecutive 12-month period shall not exceed 53,698,800 $ft^3$ for the four emission units listed above combined. [P 098-0026]

*b. Monitoring and Testing Requirements*

The Permittee shall monitor monthly and consecutive 12-month period natural gas consumption for the emission units listed above. [P 098-0026]

*c. Record Keeping Requirements*

i. The Permittee shall keep records of monthly and consecutive 12-month period natural gas consumption for the emission units listed above. These records shall be obtained from monthly utility billing records for the four emission units combined. The consecutive 12-month fuel consumption shall be calculated by adding the fuel consumption from the current month's billing record to the fuel consumption obtained from the previous 11 months of billing records. The Permittee shall make these calculations within 30 days of the end of the previous month. [P 098-0026]

ii. The Permittee shall keep records on the premises indicating continual compliance with the above conditions at all times and shall make them available upon request by the commissioner for the duration of this permit, or for the previous five years, whichever is less. [P 098-0026]

*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 date specified by the commissioner whichever is earlier. [RCSA §22a-174-33(j)(1)(X)]

**2. 40 CFR Part 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines**

*a. Limitation or Restriction*

i. The Permittee shall comply with the following emission standards: [40 CFR §60.4243(b)(1) and 40 CFR Part 60 Subpart 60 Subpart JJJJ]

(A) NOx: 1.0 g/HP-hr and 82 ppmvd@15% $O_2$

(B) CO: 2.0 g/HP-hr and 270 ppmvd@15% $O_2$

(C) VOC: 0.7 g/HP-hr and 60 ppmvd@15% $O_2$

ii. The Permittee shall operate and maintain the engines to achieve the emission standards as required in 40 CFR §60.4233 over the entire life of the engine. [40 CFR §60.4234]

iii. The Permittee shall operate and maintain each certified stationary SI internal combustion engine according to the manufacturer's emission related written instructions. [40 CFR §§60.4243(a)(1) and 60.4243(b)(1)]

iv. The Permittee must maintain and operate appropriately the air-to fuel ratio (AFR) controller on each engine in order to ensure proper operation of the engine and control device to minimize emissions at all times. [40 CFR §§60.4243(g)]

*b. Monitoring and Testing Requirements*

Record keeping specified in Section III.H.2.c of this Title V permit shall be sufficient to meet 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 comply with all record keeping requirements of the General Provisions in 40 CFR §§60.1 through 60.19, inclusive, as specified in 40 CFR Part 60 Subpart JJJJ, Table 3. [40 CFR §60.4246]

ii. The Permittee shall keep records of maintenance conducted on each engine. [40 CFR §60.4245(a)(2)]

iii. The Permittee shall keep documentation from the manufacturer certifying compliance with the emission standards in Section III.H.2.a of this Title V permit. [40 CFR §60.4245(a)(3)]

iv. The Permittee shall keep records of all notifications submitted to comply with 40 CFR Part 60 Subpart JJJJ and all documentation supporting any notification. [40 CFR §60.4245(a)(1)]

*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 date specified by the commissioner whichever is earlier. [RCSA §22a-174-33(j)(1)(X)]

## I. GROUPED EMISSIONS UNIT 15 (GEU-15): Permitted Boilers

**EU-1442:** 120 MMBtu/hr (NG) and 113.3 MMBtu/hr (oil) Boiler No. 1, Cleaver Brooks Boiler, Central Utility Plant
**EU-1443:** 120 MMBtu/hr (NG) and 113.3 MMBtu/hr (oil) Boiler No. 2, Cleaver Brooks Boiler, Central Utility Plant
**EU-1444:** 120 MMBtu/hr (NG) and 113.3 MMBtu/hr (oil) Boiler No. 10, Cleaver Brooks Boiler, Supplemental Utility Plant

**Classification:**

- Boiler operating under NSR Permit Nos. 098-0063, 098-0064, 098-0065
- Subject to RCSA §22a-174-22e
- Subject to 40 CFR Part 60 Subpart Db
- Subject to 40 CFR Part 63 Subpart JJJJJJ

### 1. Fuel Types, Fuel Sulfur Content and Fuel Consumption

*a. Limitation or Restriction*

i. Maximum fuel consumption over any consecutive 12-month period for Permit Nos. 098-0063, 098-0064 and 098-0065 combined:
(A) If boilers burn only natural gas: 510,216,000 CF

(B) If boilers burn a combination of natural gas and ULSD:

(1) Natural Gas consumption, in CF = {(510,216,000 CF) – [(137) X (ULSD Gallons consumed in any consecutive 12-month period)]}

(2) ULSD consumption shall not exceed 768,000 gallons in any consecutive 12-month period.

ii. Maximum ULSD fuel sulfur content (by weight, dry basis) shall not exceed 0.0015%. [P 098-0063, P 098-0064, P 098-0065]

*b. Monitoring and Testing Requirements*

The Permittee shall continuously monitor fuel consumption using a non-resettable totalizing fuel meter per boiler. [P 098-0063, P 098-0064, P 098-0065]

*c. Record Keeping Requirements*

i. The Permittee shall keep records of monthly and consecutive 12-month fuel consumption per boiler and combined. The consecutive 12-month fuel consumption shall be determined by adding (for each fuel) the current month's fuel consumption to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month. [P 098-0063, P 098-0064, P 098-0065]

ii. The Permittee shall keep records of the fuel certification for each delivery of ULSD 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 of the fuel as a condition of each shipment. The shipping receipt or contract shall include the date of delivery, the name of the fuel supplier, type of fuel delivered, the percentage of sulfur in such fuel, by weight, dry basis, and the method used to determine the sulfur content of such fuel. [P 098-0063, P 098-0064, P 098-0065]

*d. Reporting Requirements*

i. The Permittee shall submit report certifying the combustion of only very low sulfur fuel in the reporting period. The reporting period for the reports required under 40 CFR part 60 subpart Db is each six-month period. All reports shall be submitted to the Environmental Protection Agency and shall be postmarked by the 30th day following the end of the reporting period.
[40 CFR §60.49b(r) and §60.49b(w)]

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. Boiler and Control Equipment Operation and Continuous Emission Monitoring Requirements**

*a. Limitation or Restriction*

i. The Permittee shall comply with the CEM requirements as set forth in RCSA §22a-174-4a. CEM shall be required for the following pollutant/operational parameters and enforced on the following basis: [P 098-0063, P 098-0064, P 098-0065; RCSA §22a-174-33(j)(1)(K)]

(A) Opacity: Averaging Time: six-minute block
Emission Limit: 10% opacity

(B) NOx: Averaging Time: daily block average
Emission Limit: Natural Gas: 0.011 lb/MMBtu
ULSD: 0.098 lb/MMBtu

(C) $O_2$: Averaging Time: one hour block

ii. The Permittee shall properly operate the control equipment at all times when this equipment is in operation and emitting air pollutants. [P 098-0063, P 098-0064, P 098-0065]

*b. Monitoring and Testing Requirements*

i. The Permittee shall conduct stack testing in accordance with RCSA §22a-174-22e(m). [P 098-0063, P 098-0064, P 098-0065]

ii. The Permittee shall perform inspections of the control devices as recommended by the manufacturer. [P 098-0063, P 098-0064, P 098-0065]

iii. 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 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)]

*c. Record Keeping Requirements*

i. The Permittee shall make and keep records of the date and work performed for repairs, replacement parts and other maintenance [P 098-0063, P 098-0064, P 098-0065]

ii. The Permittee shall make and keep records of all inspections of the burners and flue gas recirculation system. [P 098-0063, P 098-0064, P 098-0065]

iii. The Permittee shall keep records of the manufacturer's written specifications and written recommendations for operation and maintenance. [P 098-0063, P 098-0064, P 098-0065]

iv. For the CEM system, the Permittee shall make and keep records of all performance evaluations, calibration checks and adjustments on such monitor. [P 098-0063, P 098-0064, P 098-0065]

v. For the CEM system, the Permittee shall make and keep records of maintenance performed. [P 098-0063, P 098-0064, P 098-0065]

vi. For the CEM system, the Permittee shall keep records of all data necessary to complete the quarterly reports. [P 098-0063, P 098-0064, P 098-0065]

vii. The Permittee shall keep charts, electronically stored data, and printed records produced by such CEM system. [P 098-0063, P 098-0064, P 098-0065]

viii. The Permittee shall keep copies of all reports and notifications submitted to the commissioner or administrator as required in Section III.I.2.d of this Title V permit. [P 098-0063, P 098-0064, P 098-0065]

*d. Reporting Requirements*

i. The Permittee shall notify the commissioner, in writing of the date of commencement of construction and the date of the initial startup of the boilers. Such written notifications shall be submitted no later than 30 days after the subject event. [P 098-0063, P 098-0064, P 098-0065]

ii. The Permittee shall notify the commissioner, in writing of the date of initial startup of the boilers. Such notifications shall be submitted no later than 15 days after the subject event.
[40 CFR §§60.7(a)(3) and 60.49b(a)]

iii. The Permittee shall notify the commission in writing of any exceedance of an operating parameter, and shall identify the cause or likely cause of such exceedance, all corrective actions and preventative measures taken with respect thereto, and the dates of such actions and measures as follows:
[P 098-0063, P 098-0064, P 098-0065]

(A) For any hazardous air pollutant, no later than 24 hours after such exceedance commenced; and

(B) For any other regulated air pollutant or operating parameter, no later than ten days after such exceedance commenced.

iv. The Permittee shall submit excess emission reports for any excess emissions occurred during the reporting period. The reporting period for the reports required under 40 CFR Part 60 Subpart Db is each six-month period. All reports shall be submitted to the Environmental Protection Agency and shall be postmarked by the 30$^{th}$ day following the end of the reporting period.
[40 CFR §60.49b(h) and §60.49b(w)]

v. The Permittee shall notify the commissioner in writing of any malfunction of the boiler or the air pollution equipment. Permittee shall submit such notification within ten days of the malfunction. The notification shall include the following: [P 098-0063, P 098-0064, P 098-0065]
(A) A description of the malfunction and a description of the circumstances surrounding the cause or likely cause of such malfunction; and
(B) A description of all corrective actions and preventive measures taken and/or planned with respect to such malfunction and the dates of such actions and measures.

vi. 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 and shall include: [P 098-0063, P 098-0064, P 098-0065]

(A) All daily block average data, in a format acceptable to the commissioner, for the three calendar month period ending the month before the due date of the report;
(B) The date and time of commencement and completion of each period of excess emissions;
(C) The magnitude and suspected cause of the excess emissions;
(D) Actions taken to correct the excess emissions;
(E) The date and time when each malfunction of the CEM system commenced and ended;
(F) Actions taken to correct each malfunction; and
(G) If no emissions or CEM system malfunctions occur during a quarter, the Permittee shall indicate that no excess emissions or malfunctions occurred during the quarter.

vii. 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. [P 098-0063, P 098-0064, P 098-0065]

viii. 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. [P 098-0063, P 098-0064, P 098-0065]

**3. PM, $PM_{10}$, $PM_{2.5}$, $SO_2$, VOC, Pb, and Hazardous Air Pollutants**

*a. Limitation or Restriction*

i. PM, $PM_{10}$, $PM_{2.5}$: [P 098-0063, P 098-0064, P 098-0065]

(A) Natural Gas: PM, $PM_{10}$, $PM_{2.5}$ emissions shall not exceed 0.008 lb/MMBtu per boiler.

(B) ULSD: PM and $PM_{10}$ emissions shall not exceed 0.017 lb/MMBtu per boiler.

(C) ULSD: $PM_{2.5}$ emissions shall not exceed 0.016 lb/MMBtu per boiler.
[

(D) Total PM and $PM_{10}$ emissions shall not exceed 2.46 TPY for natural gas and ULSD, for Permit Nos. 098-0063, 098-0064 and 098-0065 combined.

(E) Total $PM_{2.5}$ emissions shall not exceed 2.37 TPY for natural gas and ULSD, for Permit Nos. 098-0063, 098-0064 and 098-0065 combined.

ii. $SO_2$: [P 098-0063, P 098-0064, P 098-0065]

(A) Natural Gas: emissions shall not exceed 0.001 lb/MMBtu per boiler.

(B) ULSD: emissions shall not exceed 0.002 lb/MMBtu per boiler.

(C) Total $SO_2$ emissions shall not exceed 0.21 TPY for natural gas and ULSD, for Permit Nos. 098-0063, 098-0064 and 098-0065 combined.

iii. VOC: [P 098-0063, P 098-0064, P 098-0065]

(A) Natural Gas: emissions shall not exceed 0.006 lb/MMBtu per boiler.

(B) ULSD: emissions shall not exceed 0.002 lb/MMBtu per boiler.

(C) Total VOC emissions shall not exceed 1.41 TPY for natural gas and ULSD, for Permit Nos. 098-0063, 098-0064 and 098-0065 combined.

iv. Pb: [P 098-0063, P 098-0064, P 098-0065]

(A) Natural Gas: emissions shall not exceed 5.0E-07 lb/MMBtu per boiler.

(B) ULSD: emissions shall not exceed 9.0E-06 lb/MMBtu per boiler.

(C) Total Pb emissions shall not exceed 5.70E-04 TPY for natural gas and ULSD, for Permit Nos. 098-0063, 098-0064 and 098-0065 combined.

v. Hazardous Air Pollutants: This equipment shall not cause an exceedance of the maximum allowable stack concentration (MASC) for any hazardous air pollutants (HAP) emitted and listed in RCSA §22a-174-29. [P 098-0063, P 098-0064, P 098-0065]

*b. Monitoring and Testing Requirements*

Record keeping specified in Section III.I.3.c of this Title V permit shall be sufficient to meet 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 calculate and record the monthly and consecutive 12-month PM, $PM_{10}$, $PM_{2.5}$, $SO_2$, VOC and lead emissions in units of tons per boiler and for Permit Nos. 098-0063, 098-0064 and 098-0065 combined. 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 098-0063, P 098-0054, P 098-0065]

ii. The Permittee shall demonstrate compliance with the emission limits in Section III.I.3.a of this Title V permit by calculating the emission rates using the most recent approved stack test results for the pollutant (except for pollutants that have CEM), or if unavailable, emission factors from the following sources: [P 098-0063, P 098-0064, P 098-0065]

(A) Natural Gas:

(1) VOC, PM, $PM_{10}$, $PM_{2.5}$, Pb, SOx: AP-42 5th Edition, Table 1.4-2

(B) ULSD:

(1) VOC: AP-42 5th Edition, Table 1.3-3

(2) PM, $PM_{10}$, $PM_{2.5}$: AP-42 5th Edition, Table 1.3-2 and 1.3-7

(3) SOx: AP-42 5th Edition, Table 1.3-1

(4) Pb: AP-42 5th Edition, Table 1.3-10

(5) The commissioner may require other means (e.g., stack testing) to demonstrate compliance with the emission limits in Section III.I.3.a of this Title V permit, as allowed by state or federal statute, law or regulation.

*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)]

**4. NOx**

*a. Limitation or Restriction*

i. NOx: [P 098-0063, P 098-0064, P 098-0065]

(A) Natural Gas: Emissions shall not exceed 0.011 lb/MMBtu and 9 ppmvd @ 3% $O_2$ per boiler.

(B) ULSD: Emissions shall not exceed 0.098 lb/MMBtu and 75 ppmvd @ 3% $O_2$ per boiler.

(C) Total NOx emissions shall not exceed 7.41 TPY for natural gas and ULSD, for Permit Nos. 098-0063, 098-0064 and 098-0065 combined.

ii. The Permittee shall not cause or allow EU-1442, EU-1443 or EU-1444 to exceed the following emission limitation based on a daily block average: [RCSA §§22a-174-22e(d)(3)(C)]

(A) Phase 2: Effective June 1, 2023
Natural Gas: 0.10 lb/MMBtu
ULSD: 0.15 lb/MMBtu

*b. Monitoring and Testing Requirements*

i. Initial stack testing shall be required for NOx. [P 098-0063, P 098-0064, P 098-0065]

ii. Stack emission testing shall be performed in accordance with the emission test guidelines available on the DEEP website. [P 098-0063, P 098-0064, P 098-0065]

iii. The Permittee shall conduct NOx testing in accordance with RCSA 22a-174-22e.
[P 098-0063, 098-0064, 098-0065]

iv. Stack test results shall be reported as follows: all pollutants in units of lb/MMBtu and ppmvd at 3% $O_2$. [P 098-0063, P 098-0064, P 098-0065]

v. The Permittee shall conduct initial stack testing within 60 days of achieving the maximum production rate, but not later than 180 days after initial startup.
[P 098-0063, P 098-0064, P 098-0065]

vi. If required by the commissioner, the permittee shall measure NOx emissions using EPA Method 7E stack test. [RCSA §§22a-174-5(b)(7) and 22a-174-33(j)(1)(K)(ii)]

vii. The Permittee may conduct tune-ups according to the schedule and procedures of the applicable requirements of 40 CFR part 63 Subpart JJJJJJ. If the period between tune-ups in the applicable requirements of 40 CFR Part 63 Subpart JJJJJJ is greater than 60 months, a tune-up shall be conducted at least once every 60 months. [RCSA §22a-174-22e(i)(2)]

viii. Emissions data used to determine compliance with the applicable emissions limitations in Section III.I.4.a.ii of this Title V permit shall not include data collected during the following periods: [RCSA §22a-174-22e(m)(3)]

(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.

ix. The Permittee shall comply with the emission limitations of Section III.I.4.a.ii, of this Title V permit based on a daily block average, with a NOx CEM. A daily block average means the arithmetic mean of all hourly emission concentrations or rates recorded when an emission unit is operating measured over a 24-hour period from 12 a.m. (midnight) to 12 a.m. (midnight).

[RCSA §§22a-174-22e(a)(8) and 22a-174-22e(d)(3)]

*c. Record Keeping Requirements*

i. The Permittee shall calculate and record the monthly and consecutive 12-month NOx emissions in units of tons per boiler and for Permit Nos. 098-0063, 098-0064 and 098-0065 combined. 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 with 30 days of the end of the previous month. [P 098-0063, P 098-0064, P 098-0065]

ii. The Permittee shall demonstrate compliance with the emission limits in Section III.I.4.a.i of this Title V permit by calculating the emission rates using NOx CEM for natural gas and ULSD. [P 098-0063, 098-0064, 098-0065]

iii. The commissioner may require other means (e.g., stack testing) to demonstrate compliance with the emission limits in Section III.I.4.a.i of this Title V permit, as allowed by state or federal statute, law or regulation. [P 098-0063, P 098-0064, P 098-0065]

iv. The Permittee shall make and keep records of the dates and times of all emissions testing. Such records shall include the persons performing the measurements, the testing methods used, the operating conditions at the time of testing, and the results of such testing. [P 098-0063, P 098-0064, P 098-0065]

v. The Permittee shall make and keep records where applicable to show compliance with RCSA §22a174-22e. [P 098-0063, P 098-0064, P 098-0065]

vi. The following averaging times for emission limitations shall be applicable to the emission unit: [RCSA §22a-174-22e(d)(11)(A) through (C)]

(A) For a non-ozone season emission limitation, the period from October 1 to April 30, inclusive, including all periods of operation, except as provide in RCSA §22a-174-22e(m)(3);

(B) For an ozone season emission limitation, the period from May 1 to September 30, inclusive, including all pe of operation, except as provided in RCSA §22a-174-22e(m)(3);

(C) For any other emissions limitation, a daily block average, including all periods of operation, except as provic RCSA §22a-174-22e(m)(3).

*d. Reporting Requirements*

i. The Permittee shall submit a written report of the results of the stack testing not more than 60 days after the completion of the emission test. [P 098-0063, P 098-0064, P 098-0065]

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

**5. CO**

*a. Limitation or Restriction*

i. CO:[P 098-0063, P 098-0064, P 098-0065]

(A) Natural Gas: emissions shall not exceed 0.038 lb/MMBtu and 50 ppmvd @ 3% $O_2$ per boiler.

(B) ULSD: emissions shall not exceed 0.060 lb/MMBtu and 75 ppmvd @ 3% $O_2$ per boiler.

(C) Total CO emissions shall not exceed 10.74 TPY for natural gas and ULSD, for Permit Nos. 098-0063, 098-0064 and 098-0065 combined.

*b. Monitoring and Testing Requirements*

i. Initial stack testing shall be required for CO. [P 098-0063, P 098-0064, P 098-0065]

ii. Stack emission testing shall be performed in accordance with the emission test guidelines available on the DEEP website. [P 098-0063, P 098-0064, P 098-0065]

iii. Stack test results shall be reported as follows: all pollutants in units of lb/MMBtu and ppmvd at 3% $O_2$. [P 098-0063, P 098-0064, P 098-0065]

iv. The Permittee shall conduct initial stack testing within 60 days of achieving the maximum production rate, but not later than 180 days after initial startup. [P 098-0063, P 098-0064, P 098-0065]

v. Recurrent stack testing for CO shall be conducted within five years from the date of the previous stack test. [P 098-0063, P 098-0064, P 098-0065]

*c. Record Keeping Requirements*

i. The Permittee shall calculate and record the monthly and consecutive 12-month CO emissions in units of tons per boiler and for Permit Nos. 098-0063, 098-0064 and 098-0065 combined. 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 with 30 days of the end of the previous month. [P 098-0063, P 098-0054, P 098-0065]

ii. The Permittee shall demonstrate compliance with the CO emission limits in Section III.I.5.a of this Title V permit by calculating the emission rates using the most recent approved stack test results for the pollutant or if unavailable, emission factors from the following sources:
[P 098-0063, P 098-0064, P 098-0065]

(A) Natural Gas: Manufacturer's Information (CO, 50 ppmv @ 3% $O_2$, dry)

(B) ULSD: Manufacturer's Information (CO, 75 ppmv @ 3% $O_2$, dry)

(C) The commissioner may require other means (e.g., stack testing) to demonstrate compliance with the emission limits in Section III.I.5.a of this Title V permit, as allowed by state or federal statute, law or regulation.

iii. The Permittee shall make and keep records of the dates and times of all emissions testing. Such records shall include the persons performing the measurements, the testing methods used, the operating conditions at the time of testing, and the results of such testing.
[P 098-0063, 098-0064, 098-0065]

*d. Reporting Requirements*

i. The Permittee shall submit a written report of the results of the stack testing no more than 60 days after the completion of the emission test. [P 098-0063, P 098-0064, P 098-0065]

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)]

## Section III: Applicable Requirements and Compliance Demonstration

## Section III: Applicable Requirements and Compliance Demonstration

### 6. Opacity

*a. Limitation or Restriction*

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 098-0063, P 098-0064, P 098-0065]

*b. Monitoring and Testing Requirements*

i. Initial stack test shall be required for opacity (ULSD only). [P 098-0063, P 098-0064, P 098-0065]

ii. Stack emission testing shall be performed in accordance with the emission test guidelines available on the DEEP website. [P 098-0063, P 098-0064, P 098-0065]

iii. The Permittee shall conduct initial stack testing within 60 days of achieving the maximum production rate, but not later than 180 days after initial startup. [P 098-0063, P 098-0064, P 098-0065]

*c. Record Keeping Requirements*

i. The Permittee shall make and keep records of the dates and times of all emissions testing. such records shall include the persons performing the measurements, the testing methods used, the operating conditions at the time of testing, and the results of such testing.
[P 098-0063, 098-0064, 098-0065]

*d. Reporting Requirements*

i. The Permittee shall submit a written report of the results of the stack testing not more than 60 days after the completion of the emission test. [P 098-0063, P 098-0064, P 098-0065]

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. 40 CFR Part 63 Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

**Classification:**

- New oil- fired boilers at an area source of HAPs
- Boilers equipped with Oxygen Trim System
- The Permittee should re-evaluate the requirements of 40 CFR Part 63 Subpart JJJJJJ if any of the above conditions change.

*a. Limitation or Restriction*

i. The Permittee shall demonstrate initial compliance with 40 CFR Part 63 Subpart JJJJJJ within 180 days after startup of each boiler. [40 CFR §63.11210(j)(2)]

ii. The Permittee shall minimize the boilers' startup and shutdown periods according to the manufacturer's recommended procedures. [40 CFR Part 63 Subpart JJJJJJ - Table 2]

iii. The Permittee shall conduct a tune-up of each boiler every five years as specified in 40 CFR §63.11223. Each five-year tune-up must be conducted no more than 61 months after the previous tune- up. The permittee must conduct the tune-up while burning the type of fuel that provided the majority of the heat

input to the boiler over the 12 months prior to the tune-up.
[40 CFR §63.11223(c)]

iv. The Permittee, at all times, shall operate and maintain each boiler in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by 40 CFR Part 63 Subpart JJJJJJ have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the sources. [40 CFR §63.11205(a)]

*b. Monitoring and Testing Requirements*

Record keeping specified in Section III.I.7.c of this Title V permit shall be sufficient to meet 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 keep, as required in 40 CFR §63.10(b)(2)(xiv), a copy of each notification and report that is submitted to comply with 40 CFR Part 63 Subpart JJJJJJ and all documentation supporting any initial notification or notification of compliance status that is submitted.
[40 CFR §63.11225(c)(1)]

ii. The Permittee shall keep records that identify the boilers, the dates of tune-ups, the procedures followed for tune-ups, and the manufacturer's specifications to which the boilers were tuned.
[40 CFR §63.11225(c)(2)(i)]

iii. The Permittee must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and records of fuel use for the days the boiler is operating. [40 CFR §63.11225(c)(iv)]

iv. The Permittee shall keep records of the occurrence and duration of each malfunction of the boilers. [40 CFR §63.11225(c)(4)]

v. The Permittee shall keep records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in 40 CFR §63.11205(a), including corrective actions to restore the malfunctioning boiler to its normal or usual manner of operation. [40 CFR §63.11225(c)(5)]

vi. The Permittee shall keep records of the concentration of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of each boiler. [40 CFR §63.11223(b)(6)(i)]

vii. The Permittee shall keep records of any corrective actions taken as part of the tune-up of each boiler. [40 CFR §63.11223(b)(6)(ii)]

viii. The Permittee shall keep records of the type and amount of fuel used over the 12 months prior to the tune-up of each boiler, but only if it was physically and legally capable of using more than one type of fuel during that period. [40 CFR §63.11223(b)(6)(iii)]

*d. Reporting Requirements*

i. The Permittee shall prepare a five-year compliance certification report for the previous calendar year containing the information in 40 CFR §§63.11225(b)(1) and (2). This report shall be prepared by March 1 of the calendar year that follows the year that the compliance tune-up was performed and shall be submitted to the delegated authority upon request. The report must be submitted by March 15 if there were any instances described in paragraph 40 CFR §63.11225(b)(3). [40 CFR §63.11225(b)]

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)]

## J. GROUPED EMISSIONS UNIT 16 (GEU-16): Emergency Engines

**EU-1315:** 0.59 MMBtu/hr Cummins natural gas fired emergency engine – Basketball Training Facility
**EU-1325**: 1.12 MMBtu/hr Generac natural gas fired emergency engine – Main Accumulation Area
**EU-1407**: 0.93 MMBtu/hr Generac natural gas fired emergency engine – Bronwell Building

**Classification:**
- Emergency engines operating under RCSA §22a-174-3b(e)
- *Not subject to RCSA §22a-174-22e*
- Subject to 40 CFR Part 60 Subpart JJJJ

### 1. Exemption from Permitting for Construction and Operation of Emergency Engines [STATE ONLY REQUIREMENTS]

*a. Limitation or Restriction*

i. The Permittee shall operate each engine as an emergency engine as defined in RCSA §22a-174-22e. [RCSA §§22a-174-3b and 22a-174-33(j)(1)(K)(ii)]

ii. The Permittee shall not allow any of the engines to operate except during periods of testing and scheduled maintenance or during an emergency and unless the following conditions are met: [RCSA §§22a-174-3b(e)(2)(A) and (B)]

(A) Each emergency engine shall not exceed 300 hours during any 12 month rolling aggregate; and

(B) Any non-gaseous fuel consumed by each engine shall comply with the fuel sulfur content requirements of RCSA §22a-174-19b(d)(2).

*b. Monitoring and Testing Requirements*

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

*c. Record Keeping Requirements*

i. The Permittee shall make and keep the following records:

(A) Hours of operation for each month and each 12 month rolling aggregate. [RCSA §22a-174-3b(e)(4)]

(B) Records specified in RCSA §22a-174-19b(g)(3). [RCSA §22a-174-3b(h)]

ii. All records above shall be maintained for a period of five years and made available to the commissioner to inspect and copy upon request. [RCSA §22a-174-3b(e)(3)]

## Section III: Applicable Requirements and Compliance Demonstration

*d. Reporting Requirements*

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

**2. 40 CFR Part 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines**

**Classification:**

- Pursuant to 40 CFR §63.6590(c), each emergency engine meets the requirements of 40 CFR Part 63 Subpart ZZZZ by complying with 40 CFR Part 60 Subpart JJJJ.
- Emergency engines
- Emergency spark ignition (SI) engines constructed after June 12, 2006 where the engines were manufactured on or after January 1, 2009
- Rich burn engines
- EU-1315: 64 hp (40 kW), EPA certified
- EU-1407: 98 hp (60 kW), EPA certified
- EU-1325: 149 hp (100 kW), EPA certified

*a. Limitation or Restriction*

i. The Permittee of a stationary SI ICE must comply with the emission standards specified in 40 CFR §§60.4233(d) and (e) by purchasing an engine certified according to procedures specified in 40 CFR Part 60 Subpart JJJJ, for the same model year. The Permittee shall comply with the applicable emission standards as listed in 40 CFR Part 60 Subpart JJJJ – Table 1: [40 CFR §§60.4243(b), 60.4233(d) and 60.4233(e)]

(A) EU-1315 and EU-1407 (Maximum engine power greater than 25 hp and less than 100 hp): [40 CFR §60.4233(d)]
(1) NOx+HC: 10 g/hp-hr

(2) CO: 387 g/hp-hr

(B) EU-1325 (Maximum engine power greater than or equal to 100 hp):[40 CFR §60.4233(e)]

(1) NOx: 2.0 g/hp-hr

(2) CO: 4.0 g/hp-hr

(3) VOC: 1.0 g/hp-hr

ii. The Permittee shall operate and maintain stationary SI ICEs that achieve the emission standards as required in 40 CFR §60.4233 over the entire life of the engines. [40 CFR §60.4234]

iii. The Permittee must operate the emergency stationary ICE according to the requirements of 40 CFR §60.4243(d). In order for the engine to be considered an emergency stationary ICE, any operation other than emergency operation, maintenance and testing as describe below, is prohibited. If the Permittee does not operate the engines according to the applicable requirements in 40 CFR §60.4243(d), the engine will not be considered an emergency engine under 40 CFR Part 60 Subpart JJJJ and must meet all requirements for non-emergency engines. [40 CFR §60.4243(d)]

(A) The Permittee may operate the emergency stationary ICE for a maximum of 100 hours per calendar year as follows: [40 CFR §60.4243(d)(2)(i)]

(1) Emergency stationary ICE 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 Permittee 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 Permittee maintains records indicating that federal, state, or local standards require maintenance and testing of the emergency ICE beyond 100 hours per calendar year.

*b. Monitoring and Testing Requirements*

The Permittee must install a non-resettable hour meter. [40 CFR §§60.4237(b) and (c)]

*c. Record Keeping Requirements*

i. The Permittee shall comply with all record keeping requirements of the General Provisions in 40 CFR §§60.1 through 60.19, inclusive, as specified in 40 CFR Part 60 Subpart JJJJ, Table 3. [40 CFR §60.4246]

ii. The Permittee shall keep the following records: [40 CFR §60.4245(a)(1) through (3)]

(A) All notifications submitted to comply with all 40 CFR Part 60 Subpart JJJJ and all documentation supporting any notification.
(B) Maintenance conducted on the engines.

(C) Documentation from the manufacturer that the engines are certified.

*d. Reporting Requirements*

The Permittee shall comply with all reporting requirements of the General Provisions in 40 CFR §§60.1 through 60.19, inclusive, as specified in 40 CFR Part 60 Subpart JJJJ. [40 CFR §60.4246]

## K. GROUPED EMISSIONS UNIT 17 (GEU-17): Emergency Engines

**EU-1283:** 5.85 MMBtu/hr Caterpillar diesel fired emergency engine – Willimantic Well Field
**EU-1286**: 4.53 MMBtu/hr MTU Onsite Energy diesel fired emergency engine – Reclaimed Water Facility Building
**EU-1324:** 4.82 MMBtu/hr Taylor diesel fired emergency engine – Mobile Generator
**EU-1347:** 4.15 MMBtu/hr Cummins diesel fired emergency engine – Gurleyville Lift Station
**EU-1434:** 6.97 MMBtu/hr Cummins diesel fired emergency engine – Hi-Head Pump Station
**EU-1445:** 18.63 MMBtu/hr Cummins diesel fired emergency engine – Supplemental Utility Plant
**EU-1446:** 18.63 MMBtu/hr Cummins diesel fired emergency engine – Supplemental Utility Plant
**EU-1454:** 3.19 MMBtu/hr Cummins diesel fired emergency engine – Police/Fire Complex (Public Safety)

**Classification:**
- Emergency engines operating under RCSA §22a-174-3b(e)
- Subject to RCSA §22a-174-22e
- Subject to 40 CFR Part 60 Subpart IIII

**1. Exemption from permitting for Construction and Operation of Emergency Engines** [STATE ONLY REQUIREMENTS]

*a. Limitation or Restriction*

i. The Permittee shall not allow any of the emergency engines to operate except during periods of testing and scheduled maintenance or during an emergency and unless the following conditions are met: [RCSA §§22a-174-3b(e)(2)(A) and (B)]

(A) Each emergency engine shall not exceed 300 hours during any 12-month rolling aggregate, and

(B) Any non-gaseous fuel consumed by each engine shall comply with the fuel sulfur content requirements of RCSA §22a-174-19b(d)(2).

*b. Monitoring and Testing Requirements*

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

*c. Record Keeping Requirements*

i. The Permittee shall make and keep the following records:

(A) Hours of operation for each month and each 12-month rolling aggregate. [RCSA §22a-174-3b(e)(4)]

(B) Records specified in RCSA §22a-174-19b(g)(3). [RCSA §22a-174-3b(h)]

ii. All records above shall be maintained for a period of five years and made available to the commissioner to inspect and copy upon request. [RCSA §22a-174-3b(e)(3)]

*d. Reporting Requirements*

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

**2. NOx: RCSA §22a-174-22e**

*a. Limitation or Restriction*

i. The Permittee shall operate each engine as an emergency engine as defined in RCSA §22a-174-22e(a). [RCSA §§22a-174-22e and 22a-174-33(j)(1)(K)(ii)]

ii. The Permittee shall not operate any emergency engine in GEU-17 for routine schedule testing or maintenance on any day for which the commissioner has forecast that ozone levels will be "Moderate to Unhealthy for Sensitive Groups" or greater. If subsequent to the initial forecast of "Moderate to Unhealthy for Sensitive Groups" or greater, the forecast is revised to "Moderate" or lower, the Permittee is no longer prohibited from operating each engine for routine, scheduled testing or greater shall not obligate the Permittee to refrain from operation of each emergency engine on the following day. [RCSA §22a-174-22e(d)(14)]

*b. Monitoring and Testing Requirements*

Record keeping specified in Section III.K.2.c of this Title V permit shall be sufficient to meet 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 make and keep the following records:

(A) For an emergency engine subject to 40 CFR Part 63 Subpart ZZZZ, records shall be those required by 40 CFR §63.6655. [RCSA §22a-174-22e(j)(2)(A)]

(B) The date and work performed for repairs, replacement of parts and other maintenance. [RCSA §22a-174-22e(j)(2)(B)]

(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)]

(E) 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 and reports shall be retained at the premises where each 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*

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 date specified by the commissioner, whichever is earlier. [RCSA §22a-174-33(j)(1)(X)]

**3. 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines**

**Classification:**

- Pursuant to 40 CFR §63.6590(c), each emergency engine meets the requirements of 40 CFR Part 63 Subpart ZZZZ by complying with 40 CFR Part 60 Subpart IIII
- Certified Emergency engines
- Diesel compression ignition engines (not fire pumps)
- Engines commenced construction after July 11, 2005 and manufactured after April 1, 2006

**EU-1283:** Model Year: 2011, Displacement per cylinder: 18.1 L , 900 hp (600 kW) EPA Tier 2 certified

**EU-1286:** Model Year: 2012, Displacement per cylinder: 17.5 L, 752 hp (500 kW) EPA Tier 2 certified

**EU-1324**: Model Year: 2015, Displacement per cylinder: 15.2 L, 762 hp (500 kW) EPA Tier 2 certified

**EU-1347**: Model Year: 2016, Displacement per cylinder: 14.9 L, 755 hp (450 kW) EPA Tier 2 certified

**EU-1434**: Model Year: 2020, Displacement per cylinder: 23.2 L, 1,100 hp (750 kW) EPA Tier 2 certified

**EU-1445**: Model Year: 2021, Displacement per cylinder: 60.2 L, 2,922 hp (2,000 kW) EPA Tier 2 certified

**EU-1446:** Model Year: 2021, Displacement per cylinder: 60.2 L, 2,922 hp (2,000 kW) EPA Tier 2 certified

**EU-1454:** Model Year: 2022, Displacement per cylinder: 8.9 L, 455 hp (300 kW)

## Section III: Applicable Requirements and Compliance Demonstration

EPA Tier 3 certified

## Section III: Applicable Requirements and Compliance Demonstration

*a. Limitation or Restriction*

i. The Permittee of 2007 model year and later emergency stationary CI ICEs with displacement of less than 30 liter per cylinder that are not fire pump engines must comply with the following emission standards for new non-road CI engine in 40 CFR §60.4202, for all pollutants, for the same model year and maximum engine power. [40 CFR §60.4205(b)]

(A) EU-1454 (g/kW-hr): NOx+HC – 6.4; CO-3.5; PM – 0.20
[40 CFR §60.4202(a)(2); 40 CFR 1039, Appendix I]

(B) EU-1283, 1286 (g/kW-hr): NOx+HC – 8.7; CO – 5.0; PM – 0.50
[40 CFR §60.4202(e)(1); 40 CFR 1042, Appendix I]

(C) EU-1347 (g/kW-hr): NOx+HC – 6.2; CO – 5.0; PM – 0.14
[40 CFR §60.4202(f)(1); 40 CFR 1039, Appendix I]

(D) EU-1324 (g/kW-hr): NOx+HC – 7.0; CO-5.0; PM – 0.34
[40 CFR §60.4202(f)(2); 40 CFR 1042.101]

(E) EU-1434 9g/kW-hr): NOx+HC – 9.8; CO-5.0; PM-0.27
[40 CFR §60.4202(f)(2); 40 CFR 1042-101]

ii. The Permittee of emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in 40 CFR §§60.4205(d)(2) and (3).
[40 CFR §60.4205(d)]

(A) EU-1445, 1446 (g/kW-hr): NOx

(1) 14.4 when maximum engine speed is less than 130 rpm

(2) $44xn^{-0.23}$ when maximum engine speed is 130 or more but less than 2000 rpm, where n is maximum engine speed

(3) 7.7 when maximum engine speed is greater than or equal to 2000 rpm

(B) PM – 0.40

iii. The Permittee must operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR §60.4205 over the entire life of the engine. [40 CFR §60.4206]

iv. The Permittee may operate the emergency stationary RICE for a maximum of 100 hours per calendar year 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 Permittee 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 §60.4211(f)(2)]

*b. Monitoring and Testing Requirements*

i. The Permittee must install a non-resettable hour meter. [40 CFR §60.4209(a)]

ii. The Permittee shall comply with monitoring requirements in 40 CFR Part 60 Subpart IIII - Table 8 – Applicability of General Provisions to Subpart IIII. [40 CFR §60.4218]

*c. Record Keeping Requirements*

i. The Permittee shall comply with record keeping requirements in 40 CFR Part 60 Subpart IIII - Table 8 - Applicability of General Provisions to Subpart IIII. [40 CFR §60.4218]

ii. The Permittee shall maintain appropriate records indicating compliance with the emission limitation requirements in Sections III.K.3.a of this Title V permit. Such records may include, but are not limited to, manufacturer's specifications and operating recommendations, purchase records and internal operating procedures. [RCSA §22a-174-33(j)(l)(K)(ii)]

iii. The Permittee must keep records of the operation of the engine that are recorded through the non-resettable hour meter. The Permittee must record the time of operation of the engine and the reason the engine was in operation during that time. [40 CFR §60.4214(b)]

*d. Reporting Requirements*

The Permittee shall comply with reporting requirements in 40 CFR Part 60 Subpart IIII - Table 8 – Applicability of General Provisions to Subpart IIII. [40 CFR §60.4218]

## L. GROUPED EMISSIONS UNIT 18 (GEU-18): Emergency Engines

**EU-1330:** 4.82 MMBtu/hr Generac natural gas fired emergency engine – Putnam Refractory
**EU-1331:** 4.82 MMBtu/hr Generac natural gas fired emergency engine – Putnam Refractory
**EU-1332:** 4.82 MMBtu/hr Generac natural gas fired emergency engine – Putnam Refractory
**EU-1348:** 4.86 MMBtu/hr Caterpillar natural gas fired emergency engine – Innovation Partnership Building

**Classification:**
- *Not subject to RCSA §22a-174-3a*
- Emergency engines operating under collateral conditions in Permit No. 098-0026
- Subject to RCSA §22a-174-22e
- Subject to 40 CFR Part 60 Subpart JJJJ

### 1. Maximum Hours of Operation

*a. Limitation or Restriction*

i. The Permittee shall not operate each emergency engine for more than 300 hours over any consecutive 12-month period. [P 098-0026]

ii. The Permittee shall operate each engine as an emergency engine as defined in RCSA §22a-174-22e. [P 098-0026]

*b. Monitoring and Testing Requirements*

The Permittee shall monitor monthly and consecutive 12-month period operating hours for each emergency engine. [P 098-0026]

*c. Record Keeping Requirements*

i. The Permittee shall keep records for each emergency engine of monthly and consecutive 12-month period of the operating hours. The consecutive 12-month period shall be determined by adding, for each emergency engine, the current month's operating hours to that of the previous 11 months. The Permittee shall make

these calculations within 30 days of the end of the previous month.
[P 098-0026]

ii. The Permittee shall keep records on the premises indicating continual compliance with the above conditions at all times and shall make them available upon request by the commissioner. The Permittee shall retain all required records and reports for five years. [P 098-0026]

*d. Reporting Requirements*

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

**2. NOx: RCSA §22a-174-22e**

*a. Limitation or Restriction*

i. The Permittee shall operate each engine as an emergency engine as defined in RCSA §22a-174-22e(a). [P 098-0026, RCSA §§22a-174-22e and 22a-174-33(j)(1)(K)(ii)]

ii. The Permittee shall not operate the emergency engines for routine, scheduled testing or maintenance on any day for which the commissioner has forecast that ozone levels will be "moderate to unhealthy for sensitive groups" or greater. If, subsequent to the initial forecast of "moderate to unhealthy for sensitive groups" or greater, the forecast is revised to "moderate" or lower, the owner or operator is no longer prohibited from operating the engine for routine, scheduled testing or maintenance for the remainder of that day. An owner or operator of an emergency engine may rely on an ozone forecast of "moderate" or lower obtained after 3 p.m. on the preceding day. Subsequent changes to the ozone forecast after 3 p.m. that forecast ozone levels of "moderate to unhealthy for sensitive groups" or greater shall not obligate the owner or operator to refrain from operation of the emergency engine at the facility on the following day. The commissioner may exempt, by permit or order, the owner or operator of an emergency engine from this subdivision if such emergency engine is unattended and the testing is automated and cannot be modified from a remote location. [RCSA §22a-174-22e(d)(14)]

iii. Except as provided in Section III.L.2.a.iv of this Title V permit, the Permittee of a reciprocating engine subject to RCSA §22a-174-22e shall conduct an inspection and tune-up of the emission unit 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 under RCSA §22a-174-22e. The inspection and tune-up of the emission units shall be conducted according to the manufacturer's recommended procedures, or, if the manufacturer's recommendations are no longer available, according to best available practices. [RCSA §22a-174-22e(i)(1)]

iv. The Permittee of an emission unit that is subject to 40 CFR Part 60 or 40 CFR Part 63 and required to conduct a periodic tune-up by the applicable requirements of 40 CFR Part 60 or 40 CFR Part 63 may conduct tune-ups according to the schedule and procedures of the applicable requirements. If the period between the tune-ups according of 40 CFR Part 60 or 40 CFR Part 63 is greater than 60 months, a tune up shall be conducted at least once every 60 months. [RCSA §22a-174-22e(i)(2)]

*b. Monitoring and Testing Requirements*

Record keeping specified in Section III.L.2.c of this Title V permit shall be sufficient to meet 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 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 and reports 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)]

ii. The Permittee of an emergency engine shall make and keep the following records: [RCSA §22a-174-22e(j)(2)]

(A) For emergency engines not subject to 40 CFR Part 63 Subpart ZZZZ, records of total monthly operating hours of such engine, identifying the dates and operating hours of non-emergency use and the reason for non-emergency operation.

(B) The date and work performed for repairs, replacement of parts and other maintenance.

iii. Copies of all documents submitted to the commissioner pursuant to RCSA §22a-174-22e. [RCSA §22a-174-22e(j)(2)(F)]

iv. 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)]

*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)]

**3. 40 CFR Part 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engine**

**Classification:**

- Pursuant to 40 CFR §63.6590(c), these emergency engines meet the requirements of 40 CFR Part 63 Subpart ZZZZ by complying with 40 CFR Part 60 Subpart JJJJ.
- Emergency engines
- EU-1330: 636 hp (400 kWe), NG (SI), rich burn, air to fuel ratio: 9.33:1, EPA certified
- EU-1331: 636 hp (400 kWe), NG (SI), rich burn, air to fuel ratio: 9.33:1, EPA certified
- EU-1332: 636 hp (400 kWe), NG (SI), rich burn, air to fuel ratio: 9.33:1, EPA certified
- EU-1348: 637 hp (400 kWe), NG (SI), lean burn, air to fuel ratio: 16.7:1, EPA certified

*a. Limitation or Restriction*

i. The Permittee of a stationary SI ICE with a maximum engine power greater than or equal to 75 kW (100 hp) must comply with the emission standards in 40 CFR Part 60 Subpart JJJJ – Table 1. [40 CFR §60.4233(e)]

(A) NOx: 2.0 g/HP-hr; 160 ppmvd@15% $O_2$

(B) CO: 4.0 g/HP-hr; 540 ppmvd@15% $O_2$

(C) VOC: 1.0 g/HP-hr; 86 ppmvd@15% $O_2$

ii. The Permittee shall operate and maintain the stationary SI ICEs to achieve the emission standards as required in 40 CFR §60.4233 over the entire life of the engines. [40 CFR §60.4234]

iii. The Permittee of a stationary SI ICE must comply with the emission standards specified in 40 CFR §§60.4233(d) and (e) by purchasing an engine certified according to procedures specified in 40 CFR Part 60 Subpart JJJJ, for the same model year. [40 CFR §60.4243(b)(1)]

iv. The Permittee must operate the emergency stationary ICE according to the requirements in 40 CFR §60.4243(d). In order for the engines to be considered an emergency stationary ICE, any operation other than emergency operation, maintenance and testing as described below, is prohibited. If the Permittee does not operate the engines according to the applicable requirements in 40 CFR §60.4243(d), the engine will not be considered an emergency engine under 40 CFR Part 60 Subpart JJJJ and must meet all requirements for non-emergency engines. [40 CFR §60.4243(d)]

(A) The Permittee may operate the emergency stationary ICE for a maximum of 100 hours per calendar year as follows: [40 CFR §60.4243(d)(2)(i)]

(1) The emergency stationary ICEs 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 Permittee 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 Permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond the 100 hours per calendar year.

*b. Monitoring and Testing Requirements*

The Permittee must install a non-resettable hour meter. [40 CFR §§60.4237(b) and (c)]

*c. Record Keeping Requirements*

i. The Permittee shall comply with all record keeping requirements of the General Provisions in 40 CFR §§60.1 through 60.19, inclusive as specified in 40 CFR Part 60 Subpart JJJJ, Table 3. [40 CFR §60.4246]

ii. The Permittee shall keep records the following records: [40 CFR §60.4245(a)(1) through (3)]

iii. All notifications submitted to comply with all 40 CFR Part 60 Subpart JJJJ and all documentation supporting any notification.

iv. Maintenance conducted on the engines.

v. Documentation from the manufacturer that the engines are certified.

*d. Reporting Requirements*

The Permittee shall comply with all reporting requirements of the General Provisions in 40 CFR §§60.1 through 60.19, inclusive, as specified in 40 CFR Part 60 Subpart JJJJ, Table 3. [40 CFR §60.4246]

## M. GROUPED EMISSIONS UNITS 19 (GEU-19): Emergency Engines

**EU-66:** 0.51 MMBtu/hr Onan diesel fired emergency engine – WPCF Eastwood Road
**EU-68:** 0.51 MMBtu/hr Onan diesel fired emergency engine – WPCF Northwood Apartments
**Classification:**

- *Not subject to RCSA §§22a-174-3a or 22a-174-22e*
- Emergency engines operating under collateral conditions in Permit No. 098-0026
- Subject to 40 CFR Part 63 Subpart ZZZZ

## Section III: Applicable Requirements and Compliance Demonstration

### 1. Maximum Hours of Operation

*a. Limitation or Restriction*

i. The Permittee shall not operate each emergency engine for more than 500 hours over any consecutive 12-month period. [P 098-0026]

ii. The Permittee shall operate each engine as an emergency engine as defined in RCSA §22a-174-22e. [P 098-0026]

*b. Monitoring and Testing Requirements*

The Permittee shall monitor monthly and consecutive 12-month period operating hours for each emergency engine. [P 098-0026]

*c. Record Keeping Requirements*

i. The Permittee shall keep records for each emergency engine of monthly and consecutive 12-month period of operating hours. The consecutive 12-month period shall be determined by adding, for each emergency engine, the current month's operating hours to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month.
[P 098-0026]

ii. The Permittee shall keep records on the premises indicating continual compliance with the above conditions at all times and shall make them available upon request by the commissioner. The Permittee shall retain all required records and reports for five years. [P 098-0026]

*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. 40 CFR Part 63 Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

**Classification:**

- Engine Category: Institutional Emergency
- Each emergency engine is an existing stationary engine located at an area source of HAPs, constructed before June 2006.
- Compression ignition engines (CI): EU-66 (66 hp), 68 (66 hp
- The emergency engines meet the definition of emergency stationary RICE in 40 CFR §63.6675 and operate according to the applicable provisions of 40 CFR §63.6640(f).
- The emergency engines are not contractually obligated to be used in Emergency Demand response (EDR) or for local reliability criteria per 40 CFR §63.6585(f).

*a. Limitation or Restriction*

i. The existing institutional emergency stationary RICE shall not be used to supply power as part of financial arrangement with another entity. [40 CFR §63.6585(f)(3)]

ii. The Permittee may operate the emergency stationary RICE for a maximum of 100 hours per calendar year as follows: [40 CFR §63.6640(f)(2)(i)]

(A) 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 Permittee 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 Permittee maintains records indicating that federal, state, or local standards require maintenance and testing of the emergency engine beyond 100 hours per calendar.

*b. Monitoring and Testing Requirements*

Record keeping specified in Section III.M.2.c of this Title V permit shall be sufficient to meet Monitoring and Testing Requirements. [RCSA §22a-174-33(j)(1)(K)(ii)]

*c. Record Keeping Requirements*

The Permittee must keep records of the operation of each engine that is recorded through the non-resettable hour meter. The Permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for maintenance checks and readiness testing. [RCSA §22a-174-33(j)(1)(K)(ii)]

*d. Reporting Requirements*

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

## N. Grouped Emissions Unit 20 (GEU-20): Emergency Engines

**EU-584:** 2.19 MMBtu/hr Caterpillar LPG fired emergency engine –Alumni Quad
**EU-585:** 1.09 MMBtu/hr Kohler LPG fired emergency engine – Buckley Hall
**EU-586:** 0.90 MMBtu/hr Kohler LPG fired emergency engine – Shippee Hall
**EU-587:** 0.91 MMBtu/hr Onan LPG fired emergency engine – McMahon Hall
**EU-588:** 1.6 MMBtu/hr Caterpillar natural gas fired emergency engine – Hilltop (Capstone) Apartments
**EU-591:** 0.30 MMBtu/hr Kohler natural gas fired emergency engine – Hilltop Dorms
**EU-599:** 0.49 MMBtu/hr Cummins natural gas fired emergency engine – Poultry Facility
**EU-606:** 0.79 MMBtu/hr Cummins natural gas fired emergency engine – Burton Football Complex
**EU-1323:** 0.72 MMBtu/hr Ingersoll – Rand diesel fired emergency engine – WHUS Radio Tower

**Classification:**

- *Not subject to RCSA §§22a-174-3a or 22a-174-22e*
- Emergency engines operating under collateral conditions in P 098-0026, P 098-0056, P 098-0061, P 098-0062
- Subject to 40 CFR Part 63 Subpart ZZZZ

### 1. Maximum Hours of Operation

*a. Limitation or Restriction*

i. The Permittee shall not operate each emergency engine for more than 300 hours over any consecutive 12-month period. [P 098-0026, 098-0056, 098-0061, 098-0062]

ii. The Permittee shall operate each engine as an emergency engine as defined in RCSA §22a-174-22e. [P 098-0026, RCSA §22a-174-33(j)(1)(K)(ii)]

## Section III: Applicable Requirements and Compliance Demonstration

*b. Monitoring and Testing Requirements*

The Permittee shall monitor monthly and consecutive 12-month period operating hours for each emergency engine. [P 098-0026, P 098-0056, P 098-0061, P 098-0062]

*c. Record Keeping Requirements*

i. The Permittee shall keep records for each emergency engine of monthly and consecutive 12-month period of the operating hours. The consecutive 12-month period shall be determined by adding, for each emergency engine, the current month's operating hours to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month.
[P 098-0026, P 098-0056, P 098-0061, P 098-0062]

ii. The Permittee shall keep records on the premises indicating continual compliance with the above conditions at all times and shall make them available upon request by the commissioner. The Permittee shall retain all required records and reports for five years.
[P 098-0026, P 098-0056, P 098-0061, P 098-0062]

*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. 40 CFR Part 63 Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**Classification:**

- Engine Category: Institutional Emergency
- Each emergency engine is an existing stationary engine located at an area source of HAPs, constructed before June 2006.
- Compression ignition engines (CI): EU-1323 (99 hp)
- Spark ignition engines (SI): EU-584 (268 hp), 585 (150 hp), 586 (105 hp), 587 (92 hp), 588 (173 hp), 591 (37 hp), 599 (57 hp), 606(115 hp)
- The emergency engines meet the definition of emergency stationary RICE in 40 CFR §63.6675 and operate according to the applicable provisions of 40 CFR §63.6640(f).
- The emergency engines are not contractually obligated to be used in Emergency Demand response (EDR) or for local reliability criteria per 40 CFR §63.6585(f).

*a. Limitation or Restriction*

i. The existing institutional emergency stationary RICE shall not be used to supply power as part of a financial arrangement with another entity. [40 CFR §63.6585(f)(3)]

ii. The Permittee may operate the emergency stationary RICE for a maximum of 100 hours per calendar year as follows: [40 CFR §63.6640(f)(2)(i)]

(A) 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 Permittee 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 Permittee maintains records indicating that federal, state, or local standards require maintenance and testing of the emergency engine beyond 100 hours per calendar year.

*b. Monitoring and Testing Requirements*

i. Each engine must be equipped with a non-resettable hour meter. [40 §63.6625(f)]

ii. Record keeping specified in Section III.N.2.c of this Title V permit shall be sufficient to meet Monitoring and Testing Requirements. [RCSA §22a-174-33(j)(1)(K)(ii)]

*c. Record Keeping Requirements*

The Permittee must keep records of the operation of the engine in emergency and non-emergency service through the non-resettable hour meter. The Permittee must record the time of operation of the engine and the reason the engine was in operation during that time. [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)]

## O. GROUPED EMISSIONS UNIT 21 (GEU-21): Emergency Engines

**EU-1284:** 2.12 MMBtu/hr Olympian LPG fired emergency engine – Floriculture Building
**EU-1285:** 0.29 MMBtu/hr Generac natural gas fired emergency engine – President's Residence
**EU-1435:** 2.06 MMBtu/hr Generac natural gas fired emergency engine – Kellogg Barn

**Classification:**
- *Not subject to RCSA §§22a-174-3a or 22a-174-22e*
- Emergency engines operating under collateral conditions in P 098-0026
- Subject to 40 CFR Part 60 Subpart JJJJ

### 1. Maximum Hours of Operation

*a. Limitation or Restriction*

i. The Permittee shall not operate each emergency engine for more than 300 hours over any consecutive 12-month period. [P 098-0026]

ii. The Permittee shall operate each engine as an emergency engine as defined in RCSA §22a-174-22e. [P 098-0026]

*b. Monitoring and Testing Requirements*

The Permittee shall monitor monthly and consecutive 12-month period operating hours for each emergency engine. [P 098-0026]

*c. Record Keeping Requirements*

i. The Permittee shall keep records for each emergency engine of monthly and consecutive 12-month period of the operating hours. The consecutive 12-month period shall be determined by adding, for each emergency engine, the current month's operating hours to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month.
[P 098-0026]

ii. The Permittee shall keep records on the premises indicating continual compliance with the above conditions

at all times and shall make them available upon request by the commissioner. The Permittee shall retain all required records and reports for five years. [P 098-0026]

*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. 40 CFR Part 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines**

**Classification:**

- Pursuant to 40 CFR §63.6590(c), these emergency engines meet the requirements of 40 CFR Part 63 Subpart ZZZZ by complying with 40 CFR Part 60 Subpart JJJJ.
- Emergency engines
- Emergency spark ignition (SI) engines constructed after June 12, 2006 where the engines were manufactured on or after January 1, 2009.
- EU-1284: 224 hp (150 kWe), LPG (SI), lean burn, air to ratio: 33.5:1, EPA certified
- EU-1285: 34 hp (20 kWe), NG (SI), lean burn; air to fuel ratio:9.5:1, EPA certified
- EU-1435: 251 hp (150 kWe), NG, rich burn, air to fuel ratio: 11.9:1, EPA certified

*a. Limitation or Restriction*

i. The Permittee of a stationary SI ICE must comply with the emission standards in 40 CFR Part 60 Subpart JJJJ – Table 1 as follows: [40 CFR §§60.4233(d), 60.4233(e)]

(A) EU-1285:

(1) NOx: 10 g/HP-hr

(2) CO: 387 g/HP-hr

(B) EU-1284, EU-1435:

(1) NOx: 2.0 g/HP-hr, 160 ppmvd at 15% $O_2$

(2) CO: 4.0 g/HP-hr, 540 ppmvd at 15% $O_2$

(3) VOC: 1.0 g/HP-hr, 86 ppmvd at 15% $O_2$

ii. The Permittee shall operate and maintain each stationary SI ICEs that achieve the emission standards as required in 40 CFR §60.4233 over the entire life of the engines.

iii. The Permittee of a stationary SI ICE must comply with the emission standards specified in 40 CFR §§60.4233(d) and (e) by purchasing an engine certified according to procedures specified in 40 CFR Part 60 Subpart JJJJ, for the same model year. [40 CFR §60.4243(b)(1)]

iv. The Permittee must operate the emergency stationary ICE according to the requirements of 40 CFR §60.4243(d). In order for the engine to be considered an emergency stationary ICE, any operation other than emergency operation, maintenance and testing as describe below, is prohibited. If the Permittee does not operate the engines according to the applicable requirements in 40 CFR §60.4243(d), the engine will not be considered an emergency engine under 40 CFR Part 60 Subpart JJJJ and must meet all requirements for non-

emergency engines. [40 CFR §60.4243(d)]

(A) The Permittee may operate the emergency stationary ICE for a maximum of 100 hours per calendar year as follows: [40 CFR §60.4243(d)(2)(i)]

(1) Emergency stationary ICE 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 Permittee 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 Permittee maintains records indicating that federal, state, or local standards require maintenance and testing of the emergency ICE beyond 100 hours per calendar year.

*b. Monitoring and Testing Requirements*

The Permittee must install a non-resettable hour meter. [40 CFR §§60.4237(b) and (c)]

*c. Record Keeping Requirements*

i. The Permittee shall comply with all record keeping requirements of the General Provisions in 40 CFR §§60.1 through 60.19, inclusive, as specified in 40 CFR Part 60 Subpart JJJJ, Table 3. [40 CFR §60.4246]

ii. The Permittee shall keep the following records: [40 CFR §60.4245(a)(1) through (3)]

(A) All notifications submitted to comply with all 40 CFR Part 60 Subpart JJJJ and all documentation supporting any notification.
(B) Maintenance conducted on the engines.

(C) Documentation from the manufacturer that the engines are certified

*d. Reporting Requirements*

The Permittee shall comply with all reporting requirements of the General Provisions in 40 CFR §§60.1 through 60.19, inclusive, as specified in 40 CFR Part 60 Subpart JJJJ. [40 CFR §60.4246]

## P. EMISSION UNIT 549 (EU-549): Boiler

**EU-549**: 2.0 MMBtu/hr No. 2 fuel oil fired boiler – Water Pollution Control Facility

**Classification:**

- Subject to 40 CFR Part 63 Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers Area Sources
- Existing oil-fired boiler (Table 2 to 40 CFR Part 63 Subpart JJJJJJ, Option 12)
- Oil fired boiler with heat input capacity of equal to or less than 5 MMBtu/hr
- *Not subject to RCSA §22a-174-3a or 22a-174-22e*

## Section III: Applicable Requirements and Compliance Demonstration

### 1. 40 CFR Part 63 Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers Area Sources

*a. Limitation or Restriction*

i. The Permittee shall at all times, operate and maintain the boiler in a manner consistent with safety and good air pollution control practices for minimizing emissions. [40 CFR §63.11205(a)]

ii. The Permittee shall conduct a tune-up of the boiler every five years as specified in 40 CFR §63.11223. Each five-year tune-up must be conducted no more than 61 months after the previous tune-up. [40 CFR §63.11223, Table 2 - Option 12]

*b. Monitoring and Testing Requirements*

Record keeping specified in Section III.P.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 must maintain the following records:

(A) Copy of each notification and report submitted to comply with 40 CFR Part 63 Subpart JJJJJJ and all documentation supporting any initial notification or notification of compliance status. [40 CFR §63.11225(c)(1)]

(B) Records of the occurrence and duration of each malfunction of the boiler. [40 CFR §63.11225(c)(4)]

(C) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in 40 CFR §63.11205(a), including corrective actions to restore the malfunctioning boiler to its normal or usual manner of operation. [40 CFR §63.11225(c)(5)]

(D) Records of each tune-up identifying the boiler, the date of the tune-up, the procedures followed for the tune-up, and the manufacturer's specifications to which the boiler was tuned. [40 CFR §63.11225(c)(2)(i)]

(E) The concentration of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler. [40 CFR §63.11223(b)(6)(i)]

(F) A description of any corrective actions taken as part of the tune-up of the boiler. [40 CFR §63.11223)(b)(6)(ii)]

(G) The type and amount of fuel used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. [40 CFR §63.11223(b)(6)(iii)]

*d. Reporting Requirements*

i. The Permittee must submit applicable notifications in accordance with 40 CFR §63.11225(a). [40 CFR §63.11225(a)]

ii. The Permittee must prepare, by March 1 of each year, and submit to the delegated authority upon request a five-year compliance report as specified in 40 CFR §§63.11225(b)(1) and (b)(2). The Permittee must submit the report by March 15 if there was an instance as described by 40 CFR §63.11225(b)(3). [40 CFR §63.11225(b)]

## Q. EMISSIONS UNIT 558 (EU-558): Boiler

**EU-558:** 121.2 MMBtu/hr (NG) and 115.5 MMBtu/hr (oil) Boiler No. 9, English D-Type boiler Central Utility Plant

**Classification:**

- Boiler operating under NSR Permit No. 098-0026
- Subject to RCSA §22a-174-22e
- Subject to 40 CFR Part 60 Subpart Db
- Subject to 40 CFR Part 63 Subpart JJJJJJ

### 1. Fuel Types, Fuel Sulfur Content and Fuel Consumption

*a. Limitation or Restriction*

i. The Permittee shall burn No. 2 fuel oil or natural gas. [P 098-0026]

(A) The sulfur content in the fuel shall not exceed 15 ppm by weight. [RCSA §22a-174-19(b)]

(B) Maximum fuel consumption over any consecutive 12-month period shall not exceed 772.87 $MMft^3$ of natural gas and 496,440 gallons of No. 2 fuel oil. [P 098-0026]

*b. Monitoring and Testing Requirements*

The Permittee shall continuously monitor fuel consumption using a non-resettable totalizing fuel meter when more than one fuel supply tank is to service this source or when multiple sources are supplied by one fuel tank. [P 098-0026]

*c. Record Keeping Requirements*

i. The Permittee shall keep records of monthly and annual fuel consumption. Annual fuel consumption shall be based on any consecutive 12-month 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. [P 098-0026]

ii. The Permittee shall keep records of the fuel certification for each delivery of fuel from a bulk petroleum provider or a copy of the current contract with the fuel supplier supplying the fuel used by the equipment that includes the applicable sulfur content of the fuel as a condition of each shipment. The shipping receipt or contract shall include the date of delivery, the name of the fuel supplier, type of fuel delivered, the percentage of sulfur in such fuel, by weight, dry basis, and the method used to determine the sulfur content of such fuel. [P 098-0026]

*d. Reporting Requirements*

i. 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)]

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. Continuous Emission Monitoring Requirements**

*a. Limitation or Restriction*

i. The Permittee shall comply with the CEM requirements as set forth in RCSA §22a-174-4a. CEM shall be required for the following pollutant/operational parameters and enforced on the following basis: [P 098-0026, 40 CFR Part 60 Subpart Db]

(A) Opacity: Averaging time: six-minute block
Emission Limit: 20% opacity

(B) NOx: Averaging time: 24 hour rolling
Emission Limit: Natural gas: 0.040 lb/MMBtu
No. 2 fuel oil: 0.10 lb/MMBtu

(C) $O_2$: Averaging time: one hour block

*b. Monitoring and Testing Requirements*

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. 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-174-4a and 40 CFR 60, Subpart A, Appendix B and Appendix F.
[RCSA §22a-174-22e(m)(4)]

*c. Record Keeping Requirements*

i. The Permittee shall comply with the record keeping requirements of the CEM guidelines. [P 098-0026]

ii. The Permittee shall maintain reports of all monitoring and test data in accordance with RCSA §22a-174-4a(h). [RCSA §22a-174-4a]

iii. The Permittee shall make and keep records of all performance evaluations, calibrations checks and adjustments on the NOx CEM. [RCSA §22a-174-22e(j)(2)(D)(i)]

iv. The Permittee shall make and keep records of maintenance performed. [RCSA §22a-174-22e(j)(2)(D)(ii)]

*d. Reporting Requirements*

The Permittee shall comply with the reporting requirements of the CEM guidelines. [P 098-0026]

**3. $PM_{10}$, $SO_2$, VOC, CO and Pb**

*a. Limitation or Restriction*

i. $PM_{10}$: [P 098-0026]

(A) Natural gas: emissions shall not exceed 0.61 lb/hr, 0.005 lb/MMBtu and 2.01 TPY.

(B) No. 2 fuel oil: emissions shall not exceed 5.78 lb/hr, 0.05 lb/MMBtu and 1.73 TPY.

(C) Total $PM_{10}$ emissions shall not exceed 3.74 TPY for natural gas and No. 2 fuel oil, combined.

ii. $SO_2$: [P 098-0026]

(A) Natural gas: emissions shall not exceed 0.12 lb/hr, 0.001 lb/MMBtu and 0.40 TPY.

(B) No. 2 fuel oil: emissions shall not exceed 26.57 lb/hr, 0.23 lb/MMBtu and 7.97 TPY.

(C) Total $SO_2$ emissions shall not exceed 8.37 TPY for natural gas and No. 2 fuel oil, combined.

iii. VOC: [P 098-0026]

(A) Natural gas: emissions shall not exceed 0.34 lb/hr, 0.003 lb/MMBtu and 1.12 TPY.

(B) No. 2 fuel oil: emissions shall not exceed 0.81 lb/hr, 0.01 lb/MMBtu and 0.24 TPY.

(C) Total VOC emissions shall not exceed 1.36 TPY for natural gas and No. 2 fuel oil, combined.

iv. CO: [P 098-0026]

(A) Natural gas: emissions shall not exceed 3.03 lb/hr, 0.025 lb/MMBtu and 10.00 TPY.

(B) No. 2 fuel oil: emissions shall not exceed 4.62 lb/hr, 0.04 lb/MMBtu and 1.39 TPY.

(C) Total CO emissions shall not exceed 11.39 TPY for natural gas and No. 2 fuel oil, combined.

v. Pb: [P 098-0026]

(A) No. 2 fuel oil: emissions shall not exceed 0.001 lb/hr, 9.0 E-6 lb/MMBtu and 0.0003 TPY.

*b. Monitoring and Testing Requirements*

Record keeping specified in Section III.Q.3.c of this Title V permit shall be sufficient to meet Monitoring and Testing requirements. [RCSA §22a-174-33(j)(1)(K)(ii)]

*c. Record Keeping Requirements*

i. The Permittee shall calculate and record the monthly and consecutive 12-month $PM_{10,}$ $SO_2$, VOC, CO and Pb emissions in units of tons. The consecutive 12-month emissions shall be determined by adding (for each pollutant) the current month's emissions to that of the previous 11 months. Such records shall include a sample calculation for each pollutant. The Permittee shall make these calculations with 30 days of the end of the previous month. [P 098-0026, RCSA §22a-174-33(j)(1)(K)]

ii. The Permittee shall demonstrate compliance with Section III.Q.3.a of this Title V permit by calculating the emission rates using emission factors from the following sources: [P 098-0026]

(A) Manufacturer's emission factors provided by COEN Company (burner manufacturer).

(B) For calculation of emissions of lead from No. 2 fuel oil, AP- 42, Chapter 1.3, Supplement E, September 1998.

(C) For calculation of emissions of Hazardous Air Pollutants, AP-42, 5th Edition, Chapter 1.3, Supplement E, September 1998; Chapter 1.4 Supplement D, March 1998.

(D) Sulfuric Acid emissions are based on a DEEP emission factor (2.45 x S lb/1000 gal of oil, where S represents sulfur content).

*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)]

**4. NOx/Control Equipment**

*a. Limitation or Restriction*

i. NOx: [P 098-0026]

(A) Natural gas: emissions shall not exceed 4.85 lb/hr, 0.040 lb/MMBtu and 16.01 TPY.

(B) No. 2 fuel oil: emissions shall not exceed 11.55 lb/hr, 0.10 lb/MMBtu and 3.47 TPY.

(C) Total NOx emissions shall not exceed 19.48 TPY for natural gas and No. 2 fuel oil, combined.

(D) Low NOx burner and flue gas recirculation: Guaranteed NOx emission rate:

(1) Natural gas: 0.04 lb/MMBtu

(2) No. 2 fuel oil: 0.10 lb/MMBtu

ii. The Permittee shall not cause or allow EU-558 to exceed the following emission limitations based on a daily block average:
[RCSA §§22a-174-22e(d)(3)(C)]

(A) Phase 2: Effective June 1, 2023

(1) Natural gas: 0.10 lb/MMBtu

(2) No. 2 fuel oil: 0.15 lb/MMBtu

iii. The Permittee shall operate and maintain this equipment in accordance with the manufacturer's specifications and written recommendations. [P 098-0026]

iv. The Permittee shall properly operate the control equipment at all times that this equipment is in operation and emitting air pollutants. [P 098-0026]

v. The Permittee shall not cause or allow emissions of NOx from this emission unit in excess of the following [RCSA §§22a-174-22e(d)(10)(A)(i through iii)]

(A) For fuel-burning equipment that simultaneously fires two or more fuels, an emission limitation calculated

(1) Multiplying the heat input of each fuel combusted by the emissions limitations for the particular emission unit and fuel used,
(2) Summing those products, and

(3) Dividing the sum by the total heat input

*b. Monitoring and Testing Requirements*

i. If required by the commissioner, the Permittee shall measure NOx emissions using EPA Method 7E stack test. [RCSA §§22a-174-5(b)(7) and 22a-174-33(j)(1)(K)(ii)]

ii. The Permittee may conduct tune-ups according to the schedule and procedures of the applicable requirements of 40 CFR Part 63 Subpart JJJJJJ. If the period between tune-ups in the applicable requirements of 40 CFR Part 63 Subpart JJJJJ is greater than 60 months, a tune-up shall be conducted at least once every 60 months. [RCSA §22a-174-22e(i)(2)]

iii. 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 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)]

iv. Emissions data used to determine compliance with the applicable emissions limitations in Section III.Q.4.a.ii of this Title V permit shall not include data collected during the following periods: [RCSA §22a-174-22e(m)(3)]

(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.

v. The Permittee shall comply with the emission limitations of Section III.Q.4.a.ii, based on a daily block average, with a NOx CEM. A daily block average means the arithmetic mean of all hourly emission concentrations or rates recorded when an emission unit is operating measured over a 24-hour period from 12 a.m. (midnight) to 12 a.m. (midnight). [RCSA §§22a-174-22e(a)(7) and 22a-174-22e(d)(3)]

*c. Record Keeping Requirements*

i. 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 the current month's emissions to that of the previous 11 months. Such records shall include a sample calculation. The Permittee shall make these calculations within 30 days of the end of the previous month. [P 098-0026]

ii. The following averaging times for emission limitations shall be applicable to the emission unit: [RCSA §22a-174-22e(d)(11)(A) through (C)]

(A) For a non-ozone season emission limitation, the period from October 1 to April 30, inclusive, including all periods of operation, except as provide in RCSA §22a-174-22e(m)(3);

(B) For an ozone season emission limitation, the period from May 1 to September 30, inclusive, including all periods of operation, except as provided in RCSA §22a-174-22e(m)(3);

(C) For any other emissions limitation, a daily block average, including all periods of operation, except as provided in RCSA §22a-174-22e(m)(3).

iii. The Permittee shall retain all records and reports produced pursuant to this section 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 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)]

iv. The Permittee shall make and keep the following records: [RCSA §§22a-174-22e(j)(2)(B), (D)(i) through(iv), (E), (F) and (G)]

(A) Date and work performed for repairs, replacement of parts and other maintenance;

(B) Records of all performance evaluations, calibration checks and adjustments performed on the NOx CEM system;

(C) Records of maintenance performed on the NOx CEM system;

(D) All data necessary to complete the quarterly reports required under RCSA §22a-174-22e(k)(3);

(E) Charts, electronically stored data, and printed records produced by the CEM system as needed to demonstrate compliance with RCSA §22a-174-22e;

(F) 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 tune-up;

(2) a description of the work performed;

(3) the procedures used to inspect and perform adjustments.

(G) Copies of all documents submitted to the commissioner pursuant to RCSA §22a-174-22e; and

(H) Any other records or reports required by an order or permit issued by the commissioner pursuant to RCSA §22a-174-22e.

*d. Reporting Requirements*

i. The Permittee shall submit, not more than 60 days after the completion of a certification test conducted under the requirements of RCSA §22a-174-22e(m) a written report of the results of such testing to the commissioner. [RCSA §22a-174-22e(k)(2)]

ii. 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 in accordance with RCSA §22a-174-22e(k)(3). [RCSA §22a-174-22e(k)]

**5. Opacity**

*a. Limitation or Restriction*

This equipment shall not exceed 20% opacity during any six-minute block average as measured by 40 CFR Part

60, Appendix A, Reference Method 9. [P 098-0026]

*b. Monitoring and Testing Requirements*

If required by the commissioner, the Permittee shall verify opacity using visible emissions testing as measured by 40 CFR Part 60, Appendix A, Reference Method 9 or other method approved by the Department. [RCSA §22a-174-33(j)(1)(K)(ii)]

*c. Record Keeping Requirements*

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 and shall submit such records to the commissioner upon request. [RCSA §22a-174-33(j)(1)(K)(ii)]

*d. Reporting Requirements*

i. The Permittee shall submit excess emission reports for any excess emissions occurred during the reporting period. The reporting period for the reports required under 40 CFR Part 60 Subpart Db is each six-month period. All reports shall be submitted to the Environmental Protection Agency and shall be postmarked by the 30th day following the end of the reporting period.
[40 CFR §60.49b(h) and §60.49b(w)]

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, including information to determine whether cause exists for modifying, revoking, reopening, reissuing, suspending or to determine compliance with this Title V permit. [RCSA §22a-174-33(j)(1)(X)]

**6. 40 CFR Part 63 Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources**

**Classification:**
- Existing oil-fired boiler at an area source of HAPs
- Boiler is equipped with an oxygen trim system

*a. Limitation or Restriction*

i. The Permittee shall demonstrate initial compliance with 40 CFR Part 63 Subpart JJJJJJ according to the applicable provisions in 40 CFR §63.7(a)(2), except as provided in 40 CFR §63.11210(j).
[40 CFR §63.11210(c)]

ii. The Permittee shall conduct a tune-up every five years as specified in 40 CFR §63.11223. Each five-year tune-up must be conducted no more than 61 months after the previous tune-up. The Permittee must conduct the tune-up while burning the type of fuel that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up. [40 CFR §63.11223(a) and (c)]

iii. The Permittee, at all times, shall operate and maintain this boiler in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the Permittee to make any further efforts to reduce emissions if levels required by 40 CFR Part 63 Subpart JJJJJJ have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR §63.11205(a)]

*b. Monitoring and Testing Requirements*

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

*c. Record Keeping Requirements*

i. The Permittee shall keep, as required in 40 CFR §63.10(b)(2)(xiv), a copy of each notification and report that is submitted to comply with 40 CFR Part 63 Subpart JJJJJJ and all documentation supporting any Initial Notification or Notification of Compliance Status that is submitted. [40 CFR §63.11225(c)(1)]

ii. The Permittee shall keep records that identify the boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned. [40 CFR §63.11225(c)(2)(i)]

iii. The Permittee shall keep a copy of the energy assessment report. [40 CFR §63.11225(c)(2)(iii)]

iv. The Permittee shall keep records of the occurrence and duration of each malfunction of the boiler. [40 CFR §63.11225(c)(4)]

v. The Permittee shall keep records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in 40 CFR §63.11205(a), including corrective actions to restore the malfunctioning boiler to its normal or usual manner of operation. [40 CFR §63.11225(c)(5)]

vi. The Permittee shall keep records of the concentration of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler. [40 CFR §63.11223(b)(6)(i)]

vii. The Permittee shall keep records of any corrective actions taken as part of the tune-up of the boiler. [40 CFR §63.11223(b)(6)(ii)]

vii. The Permittee shall keep records of the type and amount of fuel used over the 12 months prior to the tune-up of the boiler, but only if it was physically and legally capable of using more than one type of fuel during that period. [40 CFR §63.11223(b)(6)(iii)]

*d. Reporting Requirements*

i. The Permittee shall prepare a five-year compliance certification report for the previous calendar year containing the information in 40 CFR §§63.11225(b)(1) and (2). This report shall be prepared by March 1 of the calendar year that follows the year that the compliance tune-up was performed and shall be submitted to the delegated authority upon request. The report must be submitted by March 15 if there were any instances described in paragraph 40 CFR §63.11225(b)(3). [40 CFR §63.11225(b)]

ii. The Permittee shall submit a signed statement in the Notification of Compliance Status report that indicates that the Permittee conducted a tune-up of the boiler. [40 CFR §63.11214(b)]

iii. The Permittee shall submit a signed certification in the Notification of Compliance Status report that an energy assessment of the boiler and its energy use systems was completed according to Table 2 of 40 CFR Part 63 Subpart JJJJJJ and is an accurate depiction of the Permittee's facility.

[40 CFR §63.11214(c)]

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)]

## R. EMISSIONS UNIT 551 (EU-551): Motor Pool Fuel Distribution

**Classification:**

- Subject to RCSA §22a-174-20
- Subject to RCSA §22a-174-30a
- Subject to 40 CFR Part 63 Subpart CCCCCC
- Stationary storage tank for gasoline at a dispensing facility with capacity of more than 250 gallons and monthly throughput of 10,000 gallons or more but less than 100,000 gallons.

### 1. Gasoline Storage Tank

*a. Limitation or Restriction:*

The Permittee shall not place, store, or hold in any stationary storage vessel of more than 250 gallon (950 liter) capacity any VOC with a vapor pressure of 0.75 pounds per square inch or greater under standard conditions unless such vessel is equipped with a permanent submerged fill pipe or is a pressure tank as described in RCSA §22a-174-20(a)(2)(A). Submerged fill pipes installed on or prior to the effective date of this subsection shall have a discharge point no more than 18 inches from the bottom of the storage tank or be compliant with the requirements of 40 CFR Part 63 Subpart CCCCCC. Submerged fill pipes installed after the effective date of this subsection shall have a discharge point no more than six inches from the bottom of the storage tank. [RCSA §22a-174-20(a)(5)]

*b. Monitoring and Testing Requirements*

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

*c. Record Keeping Requirements*

i. The Permittee shall maintain records including, at a minimum, the information described in RCSA §22a-174-20(a)(10)(B). All such records shall be: [RCSA §22a-174-20(A)(10)(A)]

(A) Made available to the commissioner to inspect and copy upon request, and

(B) Maintained for five years from the date such record is created.

*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 date specified by the commissioner whichever is earlier. [RCSA §22a-174-33(j)(1)(X)]

## Section III: Applicable Requirements and Compliance Demonstration

**2. Stage I Vapor Recovery (RCSA §22a-174-30a)**

*a. Limitation or restrictions*

i. The Permittee of a gasoline dispensing facility shall not transfer or allow the transfer of gasoline between a delivery vehicle and a gasoline transfer facility stationary storage tank unless such stationary storage tank is equipped with a Stage I vapor recovery system that includes:
[RCSA §22a-174-30a(c)(1)]

(A) A California Air Resources Board approved fill adapter; and

(B) A pressure/vacuum vent valve on each gasoline dispensing facility storage tank vent pipe.

ii. Any pressure/vacuum vent valve installed on and after July 1, 2015 shall be a California Air Resources Board approved pressure/vacuum vent valve. [RCSA §22a-174-30a(c)(2)]

iii. The pressure specifications for any pressure/vacuum vent valve shall be as follows:
[RCSA §22a-174-30a(c)(3)]

(A) For any pressure/vacuum vent valve installed prior to July 1, 2015:

(1) A positive pressure setting of:

(a) 3.0 inches of water, plus or minus 0.5 inch, or

(b) 2.5 to 6.0 inches of water, and

(2) A vacuum setting of 8.0 inches of water, plus or minus 2.0 inches; and

(B) For any pressure/vacuum vent valve installed on and after July 1, 2015:

(1) A positive pressure setting of 2.5 to 6.0 inches of water,

(2) A negative pressure setting of 6.0 to 10.0 inches of water, and

(3) The total leak rate of all pressure/vacuum vent valves at an affected facility, including connections, shall not exceed 0.17 cubic foot per hour at a pressure of 2.0 inches of water and 0.63 cubic foot per hour at a vacuum of 4 inches of water.

iv. Except as provided in RCSA §22a-174-30a(c)(5), a gasoline dispensing facility storage tank shall be equipped with a two-point Stage I vapor recovery system. The vapor exit port of the two-point Stage I vapor recovery system shall be designed and maintained to seal in a manner that will prevent the discharge of gasoline vapors to the atmosphere when the vapor return hose is disconnected.
[RCSA §22a-174-30a(c)(4)]

*b. Monitoring and Testing Requirements*

i. The Permittee of any gasoline dispensing facility shall conduct each of the following tests at least once per calendar year: [RCSA §§22a-174-30a(d)(1)(A) through (C), (4), (5) and (7)]

(A) For every pressure/vacuum vent valve, a pressure/vacuum vent valve test. The pressure/vacuum vent valve tests shall be conducted according to the current version of California Air Resources Board TP-

201.1E, *Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves*, as may be revised from time to time, or another test method approved by the commissioner and the Administrator;

(B) A pressure decay test. The pressure decay tests shall be conducted according to the current version of California Air Resources Board TP-201.3, *Determination of 2 Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities*, as may be revised from time to time, or another test method approved by the commissioner and the Administrator; and

(C) A vapor-space tie-in test. Vapor-space tie-in tests shall be conducted according to the current version of California Air Resources Board TP-201.3C, *Determination of Vapor Piping Connections to Underground Gasoline Storage Tanks (Tie-Tank Test)*, as may be revised from time to time, or another test method approved by the commissioner and the Administrator.

ii. If an owner or operator of any gasoline dispensing facility fails any test required by RCSA §22a-174-30a, the Permittee shall take corrective actions and retest no later than 60 days after failing the test. [RCSA §22a-174-30a(d)(10)]

*c. Record Keeping Requirements*

i. The Permittee shall maintain the following records:
[RCSA §§22a-174-30a(e)(1)(A) through (F)]

(A) All licenses, as that term is defined in CGS §4-166, to construct or operate the gasoline dispensing facility or to construct or operate a specific system at the gasoline dispensing facility.

(B) All records and results of tests performed pursuant to RCSA §22a-174-30a including the date of the testing and the names, addresses, and phone numbers of the persons who performed the tests.

(C) A record of any maintenance or repair conducted on any part of the Stage I vapor recovery system, including a description of the maintenance or repair performed, identification of any part repaired or replaced on such Stage I vapor recovery system, the dates the maintenance or repair was performed, and a general description of the location of any part repaired or replaced.

(D) A chronological file of all inspection reports of the gasoline dispensing facility issued by a representative of the commissioner or Administrator for inspections performed at the gasoline dispensing facility.

(E) A chronological file of all compliance records, including orders, warnings and notices of violations, issued by a representative of the commissioner or Administrator; and

(F) A chronological register of daily throughput.

ii. The Permittee shall make records required by RCSA §22a-174-30a available to the commissioner or the Administrator upon request. The Permittee shall make records available to the commissioner or Administrator no later than three business days after receiving such request.
[RCSA §22a-174-30a(e)(3)]

iii. The Permittee shall maintain the records for five years from the date of creation.
[RCSA §22a-174-30a(e)(4)]

iv. The Permittee shall display in a conspicuous location at the gasoline dispensing facility the address at which the records are maintained. [RCSA §22a-174-30a(e)(5)]

*d. Reporting Requirements*

i. The Permittee of any gasoline dispensing facility shall:
[RCSA §§22a-174-30a(d)(9)(A) and 22a-174-30a(d)(9)(B)]

(A) Notify the Department's Bureau of Air Management, Field Operations Section in writing of the time and location of a test required by this subsection at least seven business days in advance; and

(B) Submit a copy of the test report on a form provided by the Department to the Department's Bureau of Air Management, Field Operations Section within ten days after performing a test required by RCSA §22a-174-30a.

**3. 40 CFR Part 63 Subpart CCCCCC - National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities**

*a Limitation or Restriction*

i. The Permittee must, at all times, operate and maintain the affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of the operation and maintenance procedures, review of the operation and maintenance records, and inspection of the source. [ 40 CFR §63.11115(a)]

ii. The Permittee must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following: [40 CFR §63.11116(a)]

(A) Minimize gasoline spills;

(B) Clean up spills as expeditiously as practicable;

(C) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasket seal when not in use;

(D) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

iii. The Permittee must only load gasoline into the storage tank by utilizing a submerged fill pipe that is no more than 12 inches from the bottom of the tank. [40 CFR §63.11117(b)(1)]

*b. Monitoring and Testing requirements*

Record keeping specified in Section III.R.3.c of this Title V permit shall be sufficient to meet Monitoring and Testing Requirements. [RCSA §22a-174-33(j)(1)(K)(ii)]

*c. Record Keeping Requirements*

The Permittee shall keep records of monthly throughput of gasoline dispensed from the storage tank and provide those records to the Administrator within 24 hours of request. Records shall be kept for a period of five years. [40 CFR §§63.11111(e), (h) and 63.11117(d)]

*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 date specified by the commissioner whichever is earlier. [RCSA §22a-174-33(j)(1)(X)]

## S. EMISSION UNIT 1314 (EU-1314): Emergency Engine

**EU-1314:** 1.95 MMBtu/hr (225 hp) Cummins natural gas fired emergency engine – Young Building

**Classification:**

- Subject to 40 CFR Part 60 Subpart JJJJ
- *Not subject to RCSA §§22a-174-3a or 22a-174-22e*
- Emergency Spark Ignition Engine constructed after June 12, 2006, where the engine was manufactured on or after January 1, 2009.
- Pursuant to 40 CFR §63.6590(c), EU-1314 meets the requirements of 40 CFR Subpart ZZZZ by complying with 40 CFR Part 60 Subpart JJJJ.

### 1. 40 CFR Part 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

*a. Limitation or Restriction*

i. The Permittee shall comply with the following emission standards for all pollutants for a new spark ignition emergency engine by purchasing an engine certified according to the procedures specified in 40 CFR Part 60 Subpart JJJJ for the same model year. [40 CFR §60.4243(b)(1)]

(A) NOx: 2.0 g/HP-hr, 160 ppmvd@15% $O_2$
[40 CFR §60.4233(d); 40 CFR Part 60 Subpart JJJJ – Table 1]

(B) CO: 4.0 g/HP-hr, 540 ppmvd@15% $O_2$
[40 CFR §60.4233(d); 40 CFR Part 60 Subpart JJJJ – Table 1]

(C) VOC: 1.0 g/HP-hr, 86 ppmvd@15% $O_2$
[40 CFR §60.4233(d); 40 CFR Part 60 Subpart JJJJ – Table 1]

ii. The Permittee shall operate and maintain the engines to achieve the emission standards as required in 40 CFR §60.4233 over the entire life of the engine. [40 CFR §60.4234]

iii. The Permittee shall operate and maintain each certified stationary SI internal combustion engine according to the manufacturer's emission related written instructions. [40 CFR §60.4243(a)(1)]

iv. There is no limit on the use of the emergency stationary RICE in emergency situations. [40 CFR §60.4243(d)(1)]

v. The Permittee may operate the emergency stationary RICE for a maximum of 100 hours per calendar year 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 Permittee 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 Permittee 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 §60.4243(d)(2)(i)]

vi. Emergency stationary RICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing. [40 CFR §60.4243(d)(3)]

*b. Monitoring and Testing Requirements*

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

*c. Record Keeping Requirements*

i. The Permittee shall comply with all record keeping requirements of the General Provisions in 40 CFR §§60.1 through 60.19, inclusive, as specified in 40 CFR Part 60 Subpart JJJJ, Table 3. [40 CFR §60.4246]

ii. The Permittee shall keep records of maintenance conducted on each engine. [40 CFR §60.4245(a)(2)]

iii. The Permittee shall keep documentation from the manufacturer certifying compliance with the emission standards in Section III.R.1.a of this Title V permit. [40 CFR §60.4245(a)(3)]

iv. The Permittee shall keep records of all notifications submitted to comply with 40 CFR Part 60 Subpart JJJJ and all documentation supporting any notification. [40 CFR §60.4245(a)(1)]

*d. Reporting Requirements*

The Permittee shall comply with all reporting requirements of the General Provisions in 40 CFR §§60.1 through 60.19, inclusive, as specified in 40 CFR Part 60 Subpart JJJJ, Table 3. [40 CFR §60.4246]

## T. EMISSION UNIT 1322 (EU-1322): Emergency Engine

**EU-1322:** 1.50 MMBtu/hr (153 kWe/241 hp) Marathon MMG175 emergency engine – WHUS Radio Tower

**Classification:**

**1. Exemption from Permitting for Construction and Operation of Emergency Engine** [STATE ONLY REQUIREMENT]

*a. Limitation or Restriction*

i. The Permittee shall operate the engine as an emergency engine as defined in RCSA §22a-174-22e. [RCSA §§22a-174-3b and 22a-74-33(j)(1)(K)(ii)]

ii. The Permittee shall not allow the emergency engine to operate except during periods of testing and scheduled maintenance or during an emergency and unless the following conditions are met: [RCSA §§22a-174-3b(e)(2)(A) and 22a-174-3b(e)(2)(B)]

(A) The emergency engine shall not exceed 300 hours during any 12 month rolling aggregate; and

(B) Any non-gaseous fuel consumed by the engine shall comply with the fuel sulfur content requirements of RCSA §22a-174-19b(d)(2)]

*b. Monitoring and Testing Requirements*

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

*c. Record Keeping Requirements*

i. The Permittee shall make and keep the following records:

(A) Hours of operation for each month and each 12-month rolling aggregate. [RCSA §22a-174-3b(e)(4)]

(B) Records specified in RCSA §22a-174-19b(g)(3). [RCSA §22a-174-3b(h)]

ii. All records above shall be maintained for a period of five years and made available to the commissioner to inspect and copy upon request. [RCSA §22a-174-3b(e)(3)]

*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. 40 CFR PART 60 SUBPART IIII – Standard of Performance for Stationary Compression Ignition Internal Combustion Engines**

**Classification:**

- Pursuant to 40 CFR §63.6590(c), this emergency engine meets the requirements of 40 CFR Part 63 Subpart ZZZZ by complying with 40 CFR Part 60 Subpart IIII.
- Emergency engine
- Diesel compression ignition (CI) engine (not a fire pump)
- Model year 2014, Displacement per cylinder: 6.8 L, 241 hp (153 kW), EPA Interim Tier 4 certified (2014)
- The engine does not have a diesel particulate filter.

*a. Limitation or Restriction*

i. The Permittee shall comply with the applicable emission standards for a new nonroad engine for the same rated power in 40 CFR Part 1039, Appendix I – Table 3 for all pollutants. [40 CFR §§60.4205(b), 60.4202(a)(2)]

(A) NOx + NMHC: 4.0 g/kW-hr

(B) CO: 3.5 g/kW-hr

(C) PM: 0.20 g/kW-hr

ii. The Permittee must operate and maintain the stationary CI ICE that achieve the emission standards as required in 40 CFR §60.4205 over the entire life of the engine. [40 CFR §60.4206]

iii. The Permittee must comply with 40 CFR Part 60 Subpart IIII by purchasing an engine certified to the emission standards in 40 CFR §60.4205(b), as applicable, for the same model year and maximum engine power. The engines must be installed and configured according to the manufacturer's emission related specifications, except as permitted in 40 CFR §60.4211(g). [40 CFR §60.4211(c)]

iv. The Permittee must operate the emergency stationary ICE according to the requirements of 40 CFR §60.4211(f). In order for the engine to be considered an emergency stationary ICE, any operation other than

emergency operation, maintenance and testing as describe below, is prohibited. If the Permittee does not operate the engines according to the applicable requirements in 40 CFR §60.4211(f), the engine will not be considered an emergency engine under 40 CFR Part 60 Subpart IIII and must meet all requirements for non-emergency engines. [40 CFR §60.4211(f)]

(A) The Permittee may operate the emergency stationary ICE for a maximum of 100 hours per calendar year as follows: [40 CFR §60.4211(f)(2)(i)]

(1) Emergency stationary ICE 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 Permittee 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 Permittee maintains records indicating that federal, state, or local standards require maintenance and testing of the emergency ICE beyond 100 hours per calendar year.

v. If the Permittee does not install, configure, operate, and maintain the engines according to manufacturer's emission-related written instructions, or change emission-related settings in a way that is not permitted by the manufacturer, the Permittee must demonstrate compliance in accordance with 40 CFR §60.4211(g)(1) through (3). [40 CFR §60.4211(g)]

*b. Monitoring and Testing Requirements*

i. The Permittee must install a non-resettable hour meter. [40 CFR §60.4209(a)]

ii. The Permittee shall comply with all monitoring and testing requirements of the General Provisions in 40 CFR §§60.1 through 60.19, inclusive, as specified in 40 CFR Part 60 Subpart IIII, Table 8. [40 CFR §60.4218]

*c. Record Keeping Requirements*

i. The Permittee shall comply with all record keeping requirements of the General Provisions in 40 CFR §§60.1 through 60.19, inclusive, as specified in 40 CFR Part 60 Subpart IIII, Table 8. [40 CFR §60.4218]

ii. The Permittee shall maintain appropriate records indicating compliance with the emission limitation requirements in Sections III.S.2.a of this Title V permit. Such records may include, but are not limited to, manufacturer's specifications and operating recommendations, purchase records and internal operating procedures. [RCSA §22a-174-33(j)(l)(K)(ii)]

iii. The Permittee must keep records of the operation of the engine that are recorded through the non-resettable hour meter. The Permittee must record the time of operation of the engine and the reason the engine was in operation during that time. [40 CFR §60.4214(b)]

*d. Reporting Requirements*

The Permittee shall comply with all reporting requirements of the General Provisions in 40 CFR §§60.1 through 60.19, inclusive, as specified in 40 CFR Part 60 Subpart IIII, Table 8. [40 CFR §60.4218]

## Section III: Applicable Requirements and Compliance Demonstration

### U. EMISSION UNIT 1447 (EU-1447): Emergency Engine

**EU-1447:** 1.42 MMBtu/hr Cummins diesel fired emergency engine – Toscano Family Ice Forum

**Classification:**

- *Not subject to RCSA §22a-174-3a*
- Emergency engine operating under collateral condition in Permit No. 098-0063
- Subject to RCSA §22a-174-22e
- Subject to 40 CFR Part 60 Subpart IIII

#### 1. Hours of Operation

*a. Limitation or Restriction*

i. The Permittee shall not operate the emergency engine for more than 300 hours over any consecutive 12-month period. [P 098-0063]

ii. The Permittee shall operate the engine as an emergency engine as defined in RCSA §22a-174-22e. [P 098-0063]

*b. Monitoring and Testing Requirements*

The Permittee shall monitor hours operating hours for the emergency engine. [P 098-0063]

*c. Record Keeping Requirements*

i. The Permittee shall keep records of monthly and consecutive 12-month period operating hours for the emergency engine. The 12-month consecutive time period shall be determined by adding the current month's operating hours to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month. [P 098-0063]

ii. The Permittee shall keep records on the premises, for a period of no less than five years, indicating continual compliance with the above conditions at all times and shall make them available upon request by the commissioner. [P 098-0063]

*d. Reporting Requirements*

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

#### 2. NOx: RCSA §22a-174-22e

*a. Limitation or Restriction*

i. The Permittee shall operate each engine as an emergency engine as defined in RCSA §22a-174-22e(a). [P 098-0063, RCSA §§22a-174-22e and 22a-174-33(j)(1)(K)(ii)]

ii. The Permittee shall not operate the emergency engine for routine, scheduled testing or maintenance on any day for which the commissioner has forecast that ozone levels will be "moderate to unhealthy for sensitive groups" or greater. If, subsequent to the initial forecast of "moderate to unhealthy for sensitive groups" or greater, the forecast is revised to "moderate" or lower, the owner or operator is no longer prohibited from operating the engine for routine, scheduled testing or maintenance for the remainder of that day. An owner or operator of an emergency engine may rely on an ozone forecast of "moderate" or lower obtained after 3 p.m. on the preceding day. Subsequent changes to the ozone forecast after 3 p.m. that forecast ozone levels

of "moderate to unhealthy for sensitive groups" or greater shall not obligate the owner or operator to refrain from operation of the emergency engine at the facility on the following day. The commissioner may exempt, by permit or order, the owner or operator of an emergency engine from this subdivision if such emergency engine is unattended and the testing is automated and cannot be modified from a remote location. [RCSA §22a-174-22e(d)(14)]

iii. Except as provided in Section III.T.2.a.iv of this Title V permit, the Permittee of a reciprocating engine subject to RCSA §22a-174-22e shall conduct an inspection and tune-up of the emission unit 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 under RCSA §22a-174-22e. The inspection and tune-up of the emission units shall be conducted according to the manufacturer's recommended procedures, or, if the manufacturer's recommendations are no longer available, according to best available practices. [RCSA §22a-174-22e(i)(1)]

iv. The Permittee of an emission unit that is subject to 40 CFR Part 60 or 40 CFR Part 63 and required to conduct a periodic tune-up by the applicable requirements of 40 CFR Part 60 or 40 CFR Part 63 may conduct tune-ups according to the schedule and procedures of the applicable requirements. If the period between the tune-ups according of 40 CFR Part 60 or 40 CFR Part 63 is greater than 60 months, a tune up shall be conducted at least once every 60 months. [RCSA §22a-174-22e(i)(2)]

*b. Monitoring and Testing Requirements*

Record keeping specified in Section III.T.2.c of this Title V permit shall be sufficient to meet Monitoring and Testing Requirements. [RCSA §§22a-174-33(j)(1)(K)(ii)]

*c. Record Keeping Requirements*

i. The Permittee of an emergency engine shall make and keep the following records: [RCSA §22a-174-22e(j)(2)]

(A) The date and work performed for repairs, replacement of parts and other maintenance. [RCSA §22a-174-22e(j)(2)(B)]

(B) Copies of all documents submitted to the commissioner pursuant to RCSA §22a-174-22e. [RCSA §22a-174-22e(j)(2)(G)]

(C) 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)]

ii. 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 and reports 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*

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 date specified by the commissioner, whichever is earlier. [RCSA §22a-174-22e(j)(1)]

**3. 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines**

**Classification:**

- Pursuant to 40 CFR §63.6590(c), **EU-1447** meets the requirements of 40 CFR Part 63 Subpart ZZZZ by complying with 40 CFR Part 60 Subpart IIII
- Emergency engine
- Diesel compression ignition engine (not a fire pump)
- Model Year: 2022 , Displacement per cylinder: 4.5 L, 208 hp (125 kW), EPA Tier 3 certified

*a. Limitation or Restriction*

i. The Permittee of a 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engine must comply with the emission standards for new nonroad CI engines in 40 CFR §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.
[40 CFR §60.4205(b)]

ii. The Permittee must operate and maintain the stationary CI ICE that achieve the emission standards as required in 40 CFR §60.4205 over the entire life of the engines. [40 CFR §60.4206]

iii. The requirements of 40 CFR §60.4208 do not apply to the Permittee of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location. [40 CFR §60.4208(i)]

iv. The Permittee must comply with 40 CFR Part 60 Subpart IIII by purchasing an engine certified to the emission standards in 40 CFR §60.4205(b), as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacture's emission related specifications, except as permitted in 40 CFR §60.4211(g). [40 CFR §60.4211(c)]

v. The Permittee must operate the emergency stationary ICE according to the requirements of 40 CFR §60.4211(f). In order for the engine to be considered an emergency stationary ICE, any operation other than emergency operation, maintenance and testing as describe below, is prohibited. If the Permittee does not operate the engines according to the applicable requirements in 40 CFR §60.4211(f), the engine will not be considered an emergency engine under 40 CFR Part 60 Subpart IIII and must meet all requirements for non-emergency engines. [40 CFR §60.4211(f)]

vi. The permittee may operate the emergency stationary ICE for a maximum of 100 hours per calendar year as follows: [40 CFR §60.4211(f)(2)(i)]

(A) Emergency stationary ICE 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 Permittee may petition the Administrator for approval of additional hours to be used for maintenance records indicating that federal, state, or local standards require maintenance and testing of the emergency ICE beyond 100 hours per calendar year.

vii. If the Permittee does not install, configure, operate, and maintain the engines according to manufacturer's emission-related written instructions, or change emission-related settings in a way that is not permitted by the manufacturer, the permittee must demonstrate compliance in accordance with 40 CFR §60.4211(g)(1) through (3). [40 CFR §60.4211(g)]

*b. Monitoring and Testing Requirements*

i. The Permittee must meet the monitoring requirements specified in 40 CFR §60.4211. [60 CFR §60.4211]

ii. The Permittee must install a non-resettable hour meter. [40 CFR §60.4209(a)]

iii. The Permittee shall comply with all monitoring and testing requirements of the General Provisions in 40 CFR §§60.1 through 60.19, inclusive, as specified in 40 CFR Part 60 Subpart IIII, table 8. [40 CFR §60.4218]

*c. Record keeping Requirements*

i. The Permittee shall comply with all record keeping requirements of the General Provisions in 40 CFR §§60.1 through 60.19, inclusive, as specified in 40 CFR Part 60 Subpart IIII, Table 8. [40 CFR §60.4218]

ii. The Permittee shall maintain appropriate records indicating compliance with the emission limitation requirements in Section III.T.4.a of this Title V permit. Such records may include, but are not limited to, manufacture's specifications and operating recommendations, purchase records and internal operating procedures. [RCSA §22a-174-33(j)(1)(K)(ii)]

iii. The Permittee must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The Permittee must record the time of operation of the engine and the reason the engine was in operation during that time. [40 CFR §60.4214(b)]

*d. Reporting Requirements*

The Permittee shall comply with all reporting requirements of the General Provisions in 40 CFR §§60.1 through 60.19, inclusive, as specified in 40 CFR Part 60 Subpart IIII, Table 8. [40 CFR §60.4218]

## V. 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-174-4a(b)(1).

**2. Emission Testing:** The Permittee shall comply with the procedures for sampling, emission testing, sample analysis, and reporting as set forth in RCSA §22a-174-5.

**3. Emergency Episode Procedures:** The Permittee shall comply with the procedures for emergency episodes as set forth in RCSA §22a-174-6.

**4. 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.

**5. Prohibition of Air Pollution:** The Permittee shall comply with the requirement to prevent air pollution as set forth in RCSA §22a-174-9.

**6. Public Availability of Information:** The public availability of information shall apply, as set forth in RCSA §22a-174-10.

**7. Prohibition Against Concealment/Circumvention:** The Permittee shall comply with the prohibition against concealment or circumvention as set forth in RCSA §22a-174-11.

## Section III: Applicable Requirements and Compliance Demonstration

8. **Violations and Enforcement:** The Permittee shall not violate or cause the violation of any applicable regulation as set forth in RCSA §22a-174-12.

9. **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.

10. **No Defense to Nuisance Claim:** The Permittee shall comply with the regulations as set forth in RCSA §22a-174-14.

11. **Severability:** The Permittee shall comply with the severability requirements as set forth in RCSA §22a-174-15.

12. **Responsibility to Comply:** The Permittee shall be responsible to comply with the applicable regulations as set forth in RCSA §22a-174-16.

13. **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.

14. **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).

15. **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.

16. **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.

17. **Organic Compound Emissions:** The Permittee shall comply with the requirements for control of organic compound emissions as set forth in RCSA §22a-174-20.

18. **Nitrogen Oxide Emissions:** The Permittee shall comply with the requirements for control of nitrogen oxide emissions as set forth in RCSA §22a-174-22e.

19. **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).

20. **Open Burning:** The Permittee is prohibited from conducting open burning, except as may be allowed by CGS §22a-174(f).

21. **Asbestos:** Should the premises, as defined in 40 CFR §61.145, become subject to the national emission standard for asbestos regulations in 40 CFR Part 61 Subpart M when conducting any renovation or demolition at this premises, then the Permittee shall submit proper notification as described in 40 CFR §61.145(b) and shall comply with all other applicable requirements of 40 CFR Part 61 Subpart M.

22. **Emission Fees:** The Permittee shall pay an emission fee as set forth in RCSA §22a-174-26(d).

23. **Hazardous Air Pollutant (HAP) Emissions:** Annual HAP emissions for the premises shall be less than 10 TPY of a single HAP and less than 25 TPY of any combination of HAPs. The 12 consecutive month record of HAP emissions shall be determined by adding the current month's record to that of the previous 11 months for the premises. [P 098-0056, 098-0061, 098-0062]

## 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 | | |
| | | | | |
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## Section V: State Enforceable Terms and Conditions

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

### SECTION V: STATE ENFORCEABLE TERMS AND CONDITIONS

**A.** This Title V permit does not relieve the Permittee of the responsibility to conduct, maintain and operate the emissions units in compliance with all applicable requirements of any other Bureau of the Department of Energy and Environmental Protection or any federal, local or other state agency. Nothing in this Title V permit shall relieve the Permittee of other obligations under applicable federal, state and local law.

**B.** Nothing in this Title V permit shall affect the commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, investigate air pollution, recover costs and natural resource damages, and to impose penalties for violations of law, including but not limited to violations of this or any other permit issued to the Permittee by the commissioner.

**C.** Additional Emissions Units

**1.** The Permittee shall make and submit a written record, at the commissioner's request, within 30 days of receipt of notice from the commissioner, or by such other date specified by the commissioner, of each additional emissions unit or group of similar or identical emissions units at the premises.

**2.** Such record of additional emissions units shall include each emissions unit, or group of emissions units, at the premises which is not listed in Section II.A of this Title V permit, unless the emissions unit, or group of emissions units, is:

a. an insignificant emissions unit as defined in RCSA §22a-174-33; or

b. an emissions unit or activity listed in *White Paper for Streamlined Development of Part 70 Permit Applications, Attachment A* (EPA guidance memorandum dated July 10, 1995).

**3.** For each emissions unit, or group of emissions units, on such record, the record shall include, as available:

a. Description, including make and model;

b. Year of construction/installation or if a group, range of years of construction/installation;

c. Maximum throughput or capacity; and

d. Fuel type, if applicable.

**D.** Odors: The Permittee shall not cause or permit the emission of any substance or combination of substances which creates or contributes to an odor that constitutes a nuisance beyond the property boundary of the premises as set forth in RCSA §22a-174-23.

**E.** Noise: The Permittee shall operate in compliance with the regulations for the control of noise as set forth in RCSA §§22a-69-1 through 22a-69-7.4, inclusive.

**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.

## Section VI: Title V Requirements

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

### SECTION VI: TITLE V REQUIREMENTS

### A. SUBMITTALS TO THE COMMISSIONER & ADMINISTRATOR

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

Any document required to be submitted to the commissioner under this Title V permit shall, unless otherwise specified in writing by the commissioner, be directed to: Compliance Analysis and Coordination Unit, 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 submitted per the procedure required by the applicable requirement or otherwise in a computer-readable format and addressed to: Director, Enforcement and Compliance Assurance Division, U.S. EPA Region I, 5 Post Office Square, Suite 100 (Mailcode: 04-02), Boston, Massachusetts 02109-3912, Attn: Air Compliance 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 to this Title V permit, shall submit to the commissioner, on forms prescribed by the commissioner, written monitoring reports on March 1 and September 1 of each year or on a more frequent schedule if specified in such permit. Such monitoring reports shall include the date and description of each deviation from a permit requirement including, but not limited to:

**1.** Each deviation caused by upset or control equipment deficiencies; and

**2.** Each deviation of a permit requirement that has been monitored by the monitoring systems required under this Title V permit, which has occurred since the date of the last monitoring report; and

**3.** Each deviation caused by a failure of the monitoring system to provide reliable data.

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

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

**1.** The type of monitoring or records used to obtain such data, including record keeping;

**2.** The date, place, and time of sampling or measurement;

**3.** The name of the individual who performed the sampling or the measurement and the name of such individual's employer;

**4.** The date(s) on which analyses of such samples or measurements were performed;

**5.** The name and address of the entity that performed the analyses;

**6.** The analytical techniques or methods used for such analyses;

**7.** The results of such analyses;

**8.** The operating conditions at the subject source at the time of such sampling or measurement; and

**9.** All calibration and maintenance records relating to the instrumentation used in such sampling or measurements, all original strip-chart recordings or computer printouts generated by continuous monitoring instrumentation, and copies of all reports required by the subject permit.

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

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

**1.** Identify those obligations under the compliance plan schedule in this Title V permit which the Permittee has met, and the dates on which they were met; and

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

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

## Section VI: Title V Requirements

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

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

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

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

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

**1.** For any hazardous air pollutant, no later than 24 hours after such deviation commenced; and

**2.** For any other regulated air pollutant, no later than ten days after such deviation commenced.

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

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

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

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

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

This Title V permit shall not be deemed to:

**1.** Preclude the creation or use of emission reduction credits or allowances or the trading thereof in accordance with RCSA §§22a-174-33(j)(1)(I) and -33(j)(1)(P), provided that the commissioner's prior written approval of the creation, use, or trading is obtained;

**2**. Authorize emissions of an air pollutant so as to exceed levels prohibited pursuant to 40 CFR Part 72;

**3.** Authorize the use of allowances pursuant to 40 CFR Parts 72 through 78, inclusive, as a defense to noncompliance with any other applicable requirement; or

**4.** Impose limits on emissions from items or activities specified in RCSA §§22a-174-33(g)(3)(A) and -33(g)(3)(B) unless imposition of such limits is required by an applicable requirement.

## 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).

## Section VI: Title V Requirements

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

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

### Y. CREDIBLE EVIDENCE

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

**Print for Compliance Certification or Enforcement**

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

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

Print Enforcement Checklist

Print Compliance Certification

Compliance Certification Table (2018)