



DEPARTMENT ORDER

**Maine Army National Guard
Penobscot County
Bangor, Maine
A-755-71-M-A**

**Departmental
Findings of Fact and Order
Air Emission License
Amendment #4**

FINDINGS OF FACT

After review of the air emission license amendment application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes (M.R.S.) § 344 and § 590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

Maine Army National Guard (MEARNG) was issued Air Emission License A-755-71-I-R/A on July 18, 2014, for the operation of emission sources associated with their facilities – including ground vehicle maintenance; rotary wing aircraft staging, service, maintenance, and repair; multiple soldier readiness facilities; and a Regional Training institute (RTI) – at and in the vicinity of the Bangor International Airport. The license was subsequently amended on March 3, 2017 (A-755-71-J-A), on January 3, 2018 (A-755-71-K-A), and on February 8, 2019 (A-755-71-L-M). The equipment addressed in this license amendment is located at 300 N. Hildreth St., Bangor, Maine.

MEARNG has requested a minor modification to their license in order to install a natural gas-fired 75 kW cogeneration unit, Co-Gen Unit #2, as part of a micro-grid project.

As part of this amendment, the Department is removing certain allowances in license conditions for existing generators and engines. The subparts of federal regulations providing those allowances, 40 C.F.R. § 63.6640(f)(2)(ii)-(iii), § 60.4211(f)(2)(ii)-(iii), and § 60.4243(d)(2)(ii)-(iii), were vacated by a court decision issued May 1, 2015, after the facility's 2014 air emission license renewal had been issued. The vacated paragraphs specified that emergency engines may operate for a limited number of hours per year in two specific, non-emergency situations, but the court decision effectively removed those allowances.¹ Thus, requirements based on the vacated portions of federal rules have been removed from the Order of this air emission license.

¹ The EPA issued a memo explaining the court vacatur, found here: [ricevacaturguidance041516.pdf \(epa.gov\)](https://www.epa.gov/air-quality/ricevacaturguidance041516.pdf).

B. Emission Equipment

The following equipment is addressed in this air emission license amendment:

Stationary Engines

| Equipment | Max. Input Capacity (MMBtu/hr) | Rated Output Capacity (kW) | Fuel Type | Firing Rate (scf/hr) | Date of Manuf. | Date of Install. |
|---------------------------|--------------------------------|----------------------------|-------------|----------------------|----------------|------------------|
| Co-Gen Unit #1* (260) | 0.96 | 75 | Natural Gas | 930 | 2014 | 2014 |
| Co-Gen Unit #2** (RTI) | 0.91 | 75 | Natural Gas | 879 | 2023 | 2023 |

* Formerly labeled as Co-Gen Unit; emissions limits being revised in this amendment

** New to the license

MEARNG may operate small stationary engines smaller than 0.5 MMBtu/hr. These engines are considered insignificant activities and are not required to be included in this license. However, they are still subject to applicable State and Federal regulations. More information regarding requirements for small stationary engines is available on the Department's website at the link below.

<http://www.maine.gov/dep/air/publications/docs/SmallRICEGuidance.pdf>

Additionally, MEARNG may operate portable engines used for maintenance or emergency-only purposes. These engines are considered insignificant activities and are not required to be included in this license. However, they may still be subject to applicable State and Federal regulations.

C. Definitions

Records or Logs mean either hardcopy or electronic records.

Portable or Non-Road Engine means an internal combustion engine which is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. This definition does NOT include engines which remain or will remain at a location (excluding storage locations) for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. A location is any single site at a building, structure, facility, or installation. Any engine that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period.

An engine is not a non-road (portable) engine if it remains or will remain at a location for more than 12 consecutive months or for a shorter period of time if sited at a seasonal source. A seasonal source is a source that remains in a single location for two years or more and which operates for fewer than 12 months in a calendar year. If an engine operates at a seasonal source for one entire season, the engine does not meet the criteria of a non-road (portable) engine and is subject to applicable stationary engine requirements.

D. Application Classification

All rules, regulations, or statutes referenced in this air emission license refer to the amended version in effect as of the date this license was issued.

The modification of a minor source is considered a major or minor modification based on whether or not expected emission increases exceed the “Significant Emissions” levels as defined in the Department’s *Definitions Regulation*, 06-096 Code of Maine Rules (C.M.R.) ch. 100. The emission increases are determined by subtracting the current licensed annual emissions preceding the modification from the maximum future licensed annual emissions, as follows:

| Pollutant | Current License (tpy) | Future License (tpy) | Net Change (tpy) | Significant Emission Levels |
|-------------------|-----------------------|----------------------|------------------|-----------------------------|
| PM | 2.6 | 1.8 | -0.8 | 100 |
| PM ₁₀ | 2.6 | 1.8 | -0.8 | 100 |
| PM _{2.5} | 0.1 | 1.8 | 1.7 | 100 |
| SO ₂ | 8.8 | 0.0 | -8.8 | 100 |
| NO _x | 10.8 | 24.9 | 14.1 | 100 |
| CO | 9.9 | 30.9 | 21.0 | 100 |
| VOC | 2.8 | 0.3 | -2.5 | 100 |

This modification is determined to be a minor modification and has been processed as such.

E. Facility Classification

With the annual fuel limit on the boilers, the operating hours restriction on the emergency generators and fire pump engines, and the operating hours restriction on Co-Gen Unit #2, the facility is licensed as follows:

- As a synthetic minor source of air emissions for NO_x, because MEARNNG is subject to license restrictions that keep facility emissions below major source thresholds for criteria pollutants; and
- As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for HAP.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 C.M.R. ch. 100. Separate control requirement categories exist for new and existing equipment.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in *Definitions Regulation*, 06-096 C.M.R. ch. 100. BACT is a top-down approach to selecting air emission controls considering economic, environmental, and energy impacts.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Co-Gen Units

Co-Gen Unit #1 (260)

MEARNG operates one existing non-emergency generator designated as Co-Gen Unit #1, which is located at AASF Building #260 (260). Co-Gen Unit #1 has a combined heat and power system, which is driven by a natural gas-fired reciprocating engine. Cogeneration systems generate electricity and capture heat from the generation process that would otherwise be wasted to provide useful thermal energy to the facility. Co-Gen Unit #1 has an engine rated at 0.96 MMBtu/hr. Co-Gen Unit #1 was manufactured and installed in 2014.

Co-Gen Unit #1 was added to Air Emission License A-755-71-I-R/A in Amendment A-755-71-J-A. The emission limits for NO_x, CO, and VOC in that amendment were based on the New Source Performance Standards (NSPS) limits in 40 C.F.R. Part 60, Subpart JJJJ, Table 1. These NSPS limits typically use a compliance method including a weighted average of emissions over a range of load cases, which means that actual emissions in certain operating scenarios may be higher than the NSPS limit. To be sure that the licensed emission limits for Co-Gen Unit #1 are realistically achievable, the emissions limits for NO_x, CO, and VOC for this unit will be revised in this amendment as summarized below.

The BPT emission limits for the Co-Gen Unit #1 are based on the following:

- PM/PM₁₀/PM_{2.5} – 0.05 lb/MMBtu from 06-096 C.M.R. ch. 115, BPT
- SO₂ – 5.88 x 10⁻⁴ lb/MMBtu from AP-42 Table 3.2-3 dated 7/00
- NO_x – 2.27 lb/MMBtu from AP-42 Table 3.2-3 dated 7/00
- CO – 3.51 lb/MMBtu from AP-42 Table 3.2-3 dated 7/00
- VOC – 2.96 x 10⁻² lb/MMBtu from AP-42 Table 3.2-3 dated 7/00
- Visible Emissions – 06-096 C.M.R. ch. 115, BPT

The BPT emission limits for Co-Gen Unit #1 are the following:

| Unit | PM (lb/hr) | PM ₁₀ (lb/hr) | PM _{2.5} (lb/hr) | SO ₂ (lb/hr) | NO _x (lb/hr) | CO (lb/hr) | VOC (lb/hr) |
|----------------------|---------------|-----------------------------|------------------------------|----------------------------|----------------------------|---------------|----------------|
| Co-Gen Unit #1 (260) | 0.05 | 0.05 | 0.05 | 0.001 | 2.17 | 3.36 | 0.03 |

Visible emissions from Co-Gen Unit #1 shall not exceed 10% opacity on a six-minute block average basis.

Co-Gen Unit #2 (RTI)

MEARNG proposes to install a second non-emergency generator, designated as Co-Gen Unit #2 at the RTI Building (RTI). Co-Gen Unit #2 has a combined heat and power system driven by a natural gas-fired reciprocating engine. Co-Gen Unit #2's engine is rated at 0.91 MMBtu/hr. Co-Gen Unit #2 was manufactured in 2023 and is expected to be installed before the end of 2023.

1. BACT Findings

The BACT emission limits for Co-Gen Unit #2 are based on the following:

- PM/PM₁₀/PM_{2.5} – 0.05 lb/MMBtu from 06-096 C.M.R. ch. 115, BACT
- SO₂ – 5.88 x 10⁻⁴ lb/MMBtu from AP-42 Table 3.2-3 dated 7/00
- NO_x – 2.27 lb/MMBtu from AP-42 Table 3.2-3 dated 7/00
- CO – 3.51 lb/MMBtu from AP-42 Table 3.2-3 dated 7/00
- VOC – 2.96 x 10⁻² lb/MMBtu from AP-42 Table 3.2-3 dated 7/00
- Visible Emissions – 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Co-Gen Unit #2 are the following:

| Unit | PM (lb/hr) | PM ₁₀ (lb/hr) | PM _{2.5} (lb/hr) | SO ₂ (lb/hr) | NO _x (lb/hr) | CO (lb/hr) | VOC (lb/hr) |
|----------------------|---------------|-----------------------------|------------------------------|----------------------------|----------------------------|---------------|----------------|
| Co-Gen Unit #2 (RTI) | 0.05 | 0.05 | 0.05 | 0.001 | 2.06 | 3.18 | 0.03 |

Co-Gen Unit #2 shall be limited to 8,700 hours of operation per calendar year. To demonstrate compliance with the operating hours limit, MEARNG shall keep records of the total hours of operation of Co-Gen Unit #2 on a calendar year total basis. A current year-to-date total shall be made available to the Department upon request at any time during the calendar year.

Visible emissions from Co-Gen Unit #2 shall not exceed 10% opacity on a six-minute block average basis.

2. New Source Performance Standards

Standards of Performance for Stationary Spark Ignition Internal Combustion Engines, 40 C.F.R. Part JJJJ is applicable to Co-Gen Unit #2, since the unit was ordered after June 1, 2006, and manufactured after July 1, 2008. [40 C.F.R. § 60.4230(a)] By meeting the requirements of 40 C.F.R. Part 60, Subpart JJJJ, Co-Gen Unit #2 meets the requirements found in the *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 C.F.R. Part 63, Subpart ZZZZ. [40 C.F.R. § 63.6590(c)]

A summary of the currently applicable federal 40 C.F.R. Part 60, Subpart JJJJ requirements is listed below.

a. Emissions Standards

The engine shall meet the emissions standards for new non-road spark ignition engines found in 40 C.F.R. Part 60, Subpart JJJJ, Table 1. [40 C.F.R. § 60.4233(e)] Co-Gen Unit #2 has been certified under the voluntary manufacturer certification program described in 40 C.F.R. Part 60, Subpart JJJJ, which shows compliance to the emissions standards in Table 1. [40 C.F.R. § 60.4231(e)]

b. Operation and Maintenance Requirement

The engine shall be operated and maintained according to the manufacturer's written instructions or procedures developed by MEARNG that are approved by the engine manufacturer. MEARNG may only change those settings that are permitted by the manufacturer. In addition, MEARNG shall maintain and operate the air-to-fuel ratio controller appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times. [40 C.F.R. § 60.4243(a) and § 60.4243(g)]

MEARNG shall have available for review by the Department a copy of the manufacturer's written instructions or procedures developed by MEARNG that are approved by the engine manufacturer for engine operation and maintenance. [06-096 C.M.R. ch. 115, BPT]

c. Recordkeeping

MEARNG shall meet the requirements for maintaining and keeping records for Co-Gen Unit #2. These records shall include documentation of all maintenance activities conducted, all notifications that have been submitted to comply with this subpart including corresponding documentation, and the manufacturer's certification that the Co-Gen Unit meets the emission standards found in 40 C.F.R. Part 60, Subpart JJJJ, Table 1. [40 C.F.R. § 60.4245(a)]

3. Chapter 169

Stationary Generators, 06-096 C.M.R. ch. 169 (Chapter 169) is applicable to Co-Gen Unit #2. It is generator powered by an engine with a rated output of less than 1,000 brake horsepower (747 kW). Chapter 169 identifies emission standards for generator engines subject to this chapter and stack height requirements for certain generator engines subject to this chapter.

a. Chapter 169 Emission Standards Requirements

For Co-Gen Unit #2, MEARNG shall comply with the emission standards for non-emergency generators by complying with the applicable standards contained in 40 C.F.R. Part 60, Subpart JJJJ. [06-096 C.M.R. ch. 169, § 4(A)]

b. Chapter 169 Stack Height Requirements

Chapter 169 identifies stack height requirements for any stack used to exhaust a generator engine or combination of generator engines with a combined rated output equal to or greater than 1,000 brake horsepower (747 kW). Individual generator engines with a maximum power capacity of less than 300 kW are not included in the assessment of the combined generator power capacity exhausted through a common stack. Co-Gen Unit #2 is rated at 75 kW and exhausts through its own stack; therefore, there are no stack height requirements in this chapter applicable to Co-Gen Unit #2. [06-096 C.M.R. ch. 169, § 6]

C. Annual Emissions

The table below provides an estimate of facility-wide annual emissions for the purposes of calculating the facility’s annual air license fee and establishing the facility’s potential to emit (PTE). Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, unquantifiable fugitive particulate matter emissions are not included except when required by state or federal regulations. Maximum potential emissions were calculated based on the following assumptions:

- Limiting heat input to the boilers to a combined 35,000 MMBtu/yr;
- Operating emergency generators and fire pump engines for 100 hrs/yr each;
- Operating Co-Gen Unit #1 (AASF) for 8,760 hr/yr; and
- Operating Co-Gen Unit #2 (RTI) for 8,700 hr/yr.

This information does not represent a comprehensive list of license restrictions or permissions. That information is provided in the Order section of this license.

Total Licensed Annual Emissions for the Facility
Tons/year
 (used to calculate the annual license fee)

| | PM | PM ₁₀ | PM _{2.5} | SO ₂ | NO _x | CO | VOC |
|------------------------|------------|------------------|-------------------|-----------------|-----------------|-------------|------------|
| Boilers | 1.4 | 1.4 | 1.4 | -- | 2.5 | 1.4 | 0.1 |
| Emergency Generators | -- | -- | -- | -- | 2.9 | 0.7 | -- |
| Fire Pump Engines | -- | -- | -- | -- | 1.1 | 0.3 | -- |
| Co-Gen Units #1 and #2 | 0.4 | 0.4 | 0.4 | -- | 18.4 | 28.5 | 0.2 |
| Total TPY | 1.8 | 1.8 | 1.8 | -- | 24.9 | 30.9 | 0.3 |

| Pollutant | Tons/year |
|------------|-----------|
| Single HAP | 9.9 |
| Total HAP | 24.9 |

III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source is determined by the Department on a case-by case basis. In accordance with 06-096 C.M.R. ch. 115, an ambient air quality impact analysis is not required for a minor source if the total licensed annual emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

| Pollutant | Tons/Year |
|-------------------|-----------|
| PM ₁₀ | 25 |
| PM _{2.5} | 15 |
| SO ₂ | 50 |
| NO _x | 50 |
| CO | 250 |

The total licensed annual emissions for the facility are below the emission levels contained in the table above and there are no extenuating circumstances; therefore, an ambient air quality impact analysis is not required as part of this license amendment.

This determination is based on information provided by the applicant regarding the expected construction and operation of the proposed emission units. If the Department determines that any parameter (e.g., stack size, configuration, flow rate, emission rates, nearby structures, etc.) deviates from what was included in the application, the Department may require MEARNNG to submit additional information and may require an ambient air quality impact analysis at that time.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards, and
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License Amendment A-755-71-M-A subject to the conditions found in Air Emission License A-755-71-I-R/A; in Amendments A-755-71-J-A, A-755-71-K-A, and A-755-71-L-M; and the following conditions.

Severability. The invalidity or unenforceability of any provision of this License A-755-71-M-A or part thereof shall not affect the remainder of the provision or any other provisions. This License Amendment shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

SPECIFIC CONDITIONS

The following replaces Specific Condition (20) found in Air Emission License A-755-71-I-R/A (July 18, 2014) and Amendment A-755-71-J-A (March 3, 2017).

(20) Generators and Engines

A. Each of the emergency generators and fire pump engines shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 C.M.R. ch. 115, BPT]

Co-Gen Unit #2 shall be limited to 8,700 hours of operation per calendar year. To demonstrate compliance with the operating hours limit, MEARNG shall keep records of the total hours of operation of Co-Gen Unit #2 on a calendar year total basis. A current year-to-date total shall be made available to the Department upon request at any time during the calendar year. [06-096 C.M.R. ch. 115, BACT]

B. The fuel sulfur content for generators and fire pump engines firing distillate fuel shall be limited to 0.0015% sulfur by weight. Compliance shall be demonstrated by fuel records from the supplier documenting the type of fuel delivered and the sulfur content of the fuel or a statement that the delivered product meets Maine’s fuel sulfur standards. [06-096 C.M.R. ch. 115, BPT]

C. Emissions shall not exceed the following:

| Unit | Pollutant | lb/MMBtu | Origin and Authority |
|--------------------------------------|-----------|----------|---------------------------------------|
| Generator DG-260 and Generator (RTI) | PM | 0.12 | 06-096 C.M.R. ch. 103, § (2)(B)(1)(a) |

D. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BPT]:

| Unit | PM (lb/hr) | PM ₁₀ (lb/hr) | PM _{2.5} (lb/hr) | SO ₂ (lb/hr) | NO _x (lb/hr) | CO (lb/hr) | VOC (lb/hr) | NMHC + NO _x (lb/hr) |
|-------------------------------|------------|--------------------------|---------------------------|-------------------------|-------------------------|------------|-------------|--------------------------------|
| Firing Distillate Fuel | | | | | | | | |
| Generator (FMS #3) | 0.43 | 0.43 | 0.43 | 0.002 | 6.09 | 1.31 | 0.50 | -- |
| Generator DG-260 | 0.54 | 0.54 | 0.54 | 0.01 | 14.40 | 3.83 | 0.41 | -- |
| Emergency Generator (RTI) | 0.95 | 0.95 | 0.95 | 0.01 | 25.25 | 6.71 | 0.71 | -- |
| Emergency Generator (ARC) | 0.83 | 0.83 | 0.83 | 0.004 | 11.82 | 2.55 | 0.96 | -- |
| Fire Pump 254-1 | 0.17 | 0.17 | 0.17 | 0.001 | 2.42 | 0.52 | 0.20 | 1.33 |
| Fire Pump 254-2 | 0.17 | 0.17 | 0.17 | 0.001 | 2.42 | 0.52 | 0.20 | 1.33 |
| Fire Pump 260-FP1 | 0.43 | 0.43 | 0.43 | 0.002 | 6.16 | 1.33 | 0.50 | -- |
| Fire Pump 260-FP2 | 0.43 | 0.43 | 0.43 | 0.002 | 6.16 | 1.33 | 0.50 | -- |

| Unit | PM (lb/hr) | PM ₁₀ (lb/hr) | PM _{2.5} (lb/hr) | SO ₂ (lb/hr) | NO _x (lb/hr) | CO (lb/hr) | VOC (lb/hr) | NMHC + NO _x (lb/hr) |
|-------------------------------|---------------|-----------------------------|------------------------------|----------------------------|----------------------------|---------------|----------------|--------------------------------------|
| Firing Distillate Fuel | | | | | | | | |
| Fire Pump 260-FP3 | 0.43 | 0.43 | 0.43 | 0.002 | 6.16 | 1.33 | 0.50 | -- |

| Unit | PM (lb/hr) | PM ₁₀ (lb/hr) | PM _{2.5} (lb/hr) | SO ₂ (lb/hr) | NO _x (lb/hr) | CO (lb/hr) | VOC (lb/hr) |
|---------------------------|---------------|-----------------------------|------------------------------|----------------------------|----------------------------|---------------|----------------|
| Firing Natural Gas | | | | | | | |
| Co-Gen Unit #1 (260) | 0.05 | 0.05 | 0.05 | 0.001 | 2.17 | 3.36 | 0.03 |
| Co-Gen Unit #2 (RTI) | 0.05 | 0.05 | 0.05 | 0.001 | 2.06 | 3.18 | 0.03 |

E. Visible Emissions

Visible emissions from each of the distillate fuel-fired emergency generators and engines shall not exceed 20% opacity on a six-minute block average basis [06-096 C.M.R. ch. 115, BPT]

Visible emissions from each of the natural gas-fired Co-Gen Units #1 and #2 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

F. Subpart III Requirements

The emergency generators **Generator (FMS#3)**, **Generator (RTI)**, and **Emergency Generator (ARC)** and the emergency fire pump engines **Fire Pump 254-1** and **Fire Pump 254-2** shall meet the applicable requirements of 40 C.F.R. Part 60, Subpart III, including the following:

1. Manufacturer Certification Requirement

MEARNG's generators subject to this Subpart that are not fire pump engines shall be certified by the manufacturer as meeting the emission standards for new non-road compression ignition engines found in 40 C.F.R. §60.4202. [40 C.F.R. § 60.4205(b)]

MEARNG's fire pump engines **Fire Pump 254-1** and **Fire Pump 254-2** shall comply with the applicable emission standards in Table 4 of 40 C.F.R. Part 60, Subpart III. [40 C.F.R. § 60.4205(c)]

2. Ultra-Low Sulfur Fuel

The distillate fuel fired in the generators and fire pump engines shall not exceed 15 ppm sulfur (0.0015% sulfur by weight), except that any existing fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. [40 C.F.R. § 60.4207(b) and 06-096 C.M.R. ch. 115, BPT]

3. Non-Resettable Hour Meter

A non-resettable hour meter shall be installed and operated on each generator and engine. [40 C.F.R. § 60.4209(a)]

4. Operation and Maintenance

The generators and engines shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by the facility that are approved by the engine manufacturer. MEARNG may only change those emission-related settings that are permitted by the manufacturer. [40 C.F.R. § 60.4211(a)]

5. Annual Time Limit for Maintenance and Testing

The generators and engines shall each be limited to 100 hours/year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations. This does not include peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity unless the conditions in § 60.4211(f)(i) are met. [40 C.F.R. § 60.4211(f) and 06-096 C.M.R. ch. 115, BPT]

6. Recordkeeping

MEARNG shall keep records that include maintenance conducted on each generator and engine and the hours of operation of each unit recorded through its non-resettable hour meter. Documentation shall include the number of hours each unit operated for emergency purposes, the number of hours each unit operated for non-emergency purposes, and the reason each engine was in operation each time. [40 C.F.R. § 60.4214(b)]

G. Subpart JJJJ Requirements for Co-Gen Units #1 and #2

(1) Emissions Standards

The engines shall meet the emissions standards for new non-road spark ignition engines found in 40 C.F.R. Part 60, Subpart JJJJ, Table 1. [40 C.F.R. § 60.4233(e)] Both Co-Gen Units have been certified under the voluntary manufacturer certification program described in 40 C.F.R. Part 60, Subpart JJJJ, which shows compliance to the emissions standards in Table 1. [40 C.F.R. § 60.4231(e)]

(2) Operation and Maintenance Requirement

The engines shall be operated and maintained according to the manufacturer's written instructions or procedures developed by MEARNG that are approved by the engine manufacturer. MEARNG may only change those settings that are permitted by the manufacturer. In addition, MEARNG shall maintain and operate the air-to-fuel ratio controller appropriately in order to ensure proper operation of

the engine and control device to minimize emissions at all times. [40 C.F.R. § 60.4243(a) and § 60.4243(g)]

MEARNG shall have available for review by the Department a copy of the manufacturer's written instructions or procedures developed by MEARNG that are approved by the engine manufacturer for engine operation and maintenance. [06-096 C.M.R. ch. 115, BPT]

(3) Recordkeeping

MEARNG shall meet the requirements for maintaining and keeping records for Co-Gen Units #1 and #2. These records shall include documentation of all maintenance activities conducted, all notifications that have been submitted to comply with this subpart including corresponding documentation, and the manufacturer's certification that each Co-Gen Unit meets the emission standards found in 40 C.F.R. Part 60, Subpart JJJJ, Table 1. [40 C.F.R. § 60.4245(a)]

H. NESHAP 40 C.F.R. Part 63, Subpart ZZZZ Requirements

The emergency **Generator DG-260** and the emergency fire pump engines **Fire Pump 260-FP1**, and **Fire Pump 260-FP2** shall meet the applicable requirements of 40 C.F.R. Part 63, Subpart ZZZZ, including the following:

1. Operation and Maintenance Requirements

MEARNG shall meet the following operational limitations for each of the emergency engines and fire pump engines subject to this subpart:

- a. Change the oil and filter annually,
- b. Inspect the air cleaner annually and replace as necessary, and
- b. Inspect the hoses and belts annually and replace as necessary.

A log shall be maintained documenting compliance with these requirements.

[40 C.F.R. § 63.6603(a) and Table 2(d); and 06-096 C.M.R. ch. 115]

Each generator and fire pump shall be operated and maintained according to the manufacturer's emission-related written instructions, or MEARNG shall develop a maintenance plan which provides to the extent practicable for the maintenance and operation of each engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 C.F.R. § 63.6625(e)]

2. Optional Oil Analysis Program

MEARNG has the option of utilizing an oil analysis program which complies with the requirements of 40 C.F.R. § 63.6625(i) in order to extend the specified oil change requirement. If this option is used, MEARNG must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engines. [40 C.F.R. § 63.6625(i)]

3. Non-Resettable Hour Meter

A non-resettable hour meter shall be installed and operated on each generator and engine. [40 C.F.R. § 63.6625(f)]

4. Startup Idle and Startup Time Minimization Requirements

During periods of startup, the facility must minimize each engine's time spent at idle and minimize each engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 C.F.R. § 63.6625(h) & 40 C.F.R. Part 63, Subpart ZZZZ Table 2d]

5. Annual Maintenance and Testing Time Limits

Each generator and engine shall be limited to 100 hours/year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise to supply power as part of a financial arrangement with another entity). [40 C.F.R. § 63.6640(f) and 06-096 C.M.R. ch. 115]

6. Recordkeeping Requirements

MEARNG shall keep records that include maintenance conducted on each generator and engine and the hours of operation of each unit recorded through its non-resettable hour meter. Documentation for each unit shall include the number of hours operated it was for emergency purposes, the number of hours it was operated for non-emergency purposes, and the reason each engine was in operation each time. [40 C.F.R. §§ 63.6655(f)]

I. Chapter 169 Requirements for Co-Gen Unit #2

For Co-Gen Unit #2, MEARNG shall comply with the emission standards for non-emergency generators by complying with the applicable standards contained in 40 C.F.R. Part 60, Subpart JJJJ. [06-096 C.M.R. ch. 169, § 4(A)]

The following condition shall be in addition to those conditions contained in Air Emission License A-755-71-I-R/A (July 18, 2014) and Amendments A-755-71-J-A (March 3, 2017), A 755 71-K-A (January 3, 2018), and A-755-71-L-M (February 8, 2019).

- (25) If the Department determines that any parameter value pertaining to construction and operation of the proposed emissions units, including but not limited to stack size, configuration, flow rate, emission rates, nearby structures, etc., deviates from what was submitted in the application or ambient air quality impact analysis for this air emission license, MEARNG may be required to submit additional information. Upon written request from the Department, MEARNG shall provide information necessary to demonstrate AAQS will not be exceeded, potentially including submission of an ambient air quality impact analysis or an application to amend this air emission license to resolve any deficiencies and ensure compliance with AAQS. Submission of this information is due within 60 days of the Department's written request unless otherwise stated in the Department's letter. [06-096 C.M.R. ch. 115, § 2(O)]

DONE AND DATED IN AUGUSTA, MAINE THIS 12th DAY OF JUNE, 2023.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:  for
MELANIE LOYZIM, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-755-71-I-R/A.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: May 3, 2023

Date of application acceptance: May 8, 2023

Date filed with the Board of Environmental Protection:

This Order prepared by Kendra Nash, Bureau of Air Quality.

FILED
JUN 12, 2023
State of Maine
Board of Environmental Protection