



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

Unum Corporation  
Cumberland County  
Portland, Maine  
A-657-71-P-R/M

Departmental  
Findings of Fact and Order  
Air Emission License  
Renewal and Minor Revision

**FINDINGS OF FACT**

After review of the air emission license renewal 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**

Unum Corporation (Unum) has applied to renew their Air Emission License for the operation of emission sources associated with their office facility. Unum has additionally requested to amend their Air Emission License to notate the removal of HO3-Boiler #4.

The equipment addressed in this license is located at 2211 Congress St., Portland, Maine.

**B. Emission Equipment**

The following equipment is addressed in this air emission license:

**Boilers**

Equipment	Max. Capacity (MMBtu/hr)	Maximum Firing Rate (scf/hr)	Fuel Type	Date of Manuf.	Date of Install.	Stack #
2211-Boiler #1	1.0	971	Natural Gas	2020	2020	2211
HO2-Boiler #1a	3.5	3,391	Natural Gas	2003	2003	1
HO2-Boiler #1b	3.5	3,391	Natural Gas	2003	2003	1
HO2-Boiler #2a	2.1	2,010	Natural Gas	2002	2002	1
HO2-Boiler #2b	2.1	2,010	Natural Gas	2002	2002	1
HO2-Boiler #2c	2.1	2,010	Natural Gas	2002	2002	1
HO2-Boiler #2d	2.1	2,010	Natural Gas	2002	2002	1
HO2-Boiler #2e	2.1	2,010	Natural Gas	2002	2002	1
HO2-Boiler #3	1.0	971	Natural Gas	1996	1996	1
HO3-Boiler #1	4.5	4,369	Natural Gas	1998	1998	6
HO3-Boiler #2	4.5	4,344	Natural Gas	1998	1998	7
HO3-Boiler #3	4.5	4,344	Natural Gas	1998	1998	7
HO3-Boiler #4 *	4.5	4,344	Natural Gas	1998	1998	7

\* This boiler has been removed from the facility.

### Stationary Engines

Equipment	Max. Input Capacity (MMBtu/hr)	Rated Output Capacity (kW)	Fuel Type	Firing Rate (gal/hr)	Date of Manuf.	Date of Install.
2211-Generator #1A	1.4	125	Distillate Fuel	10.0	2020	2020
HO2-Generator #2	2.7	250	Distillate Fuel	19.4	2010	2010
HO3-Generator #3	1.0	100	Distillate Fuel	7.4	1998	1998
Generator #4	20.2	2,000	Distillate Fuel	147.0	2005	2005
Generator #5	20.2	2,000	Distillate Fuel	147.0	2005	2005

Unum 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, Unum 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

Distillate Fuel means the following:

- Fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials (ASTM) in ASTM D396;
- Diesel fuel oil numbers 1 or 2, as defined in ASTM D975;
- Kerosene, as defined in ASTM D3699;
- Biodiesel, as defined in ASTM D6751; or
- Biodiesel blends, as defined in ASTM D7467.

Records or Logs mean either hardcopy or electronic records.

#### 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 application for Unum does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of currently licensed emission units and a minor revision to remove one emissions unit and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (C.M.R.) ch. 115.

E. Facility Classification

With the annual operating hours restriction on the emergency generators, the facility is licensed as follows:

- As a synthetic minor source of air emissions for criteria pollutants, because Unum is subject to license restrictions that keep facility emissions below major source thresholds for NO<sub>x</sub>; 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 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. Boilers

Unum operates 12 Boilers for heat. Boilers 2211-Boiler #1, HO2-Boiler #1a, HO2-Boiler #1b, HO2-Boiler #2a, HO2-Boiler #2b, HO2-Boiler #2c, HO2-Boiler #2d, HO2-Boiler #2e, HO2-Boiler #3, HO3-Boiler #1, HO3-Boiler #2, and HO3-Boiler #3 are rated at 1.0, 3.5, 3.5, 2.1, 2.1, 2.1, 2.1, 1.0, 4.5, 4.5, and 4.5 MMBtu/hr, respectively. Each boiler is licensed to fire natural gas.

The Boilers HO2-Boiler #1a, HO2-Boiler #1b, HO2-Boiler #2a, HO2-Boiler #2b, HO2-Boiler #2c, HO2-Boiler #2d, and HO2-Boiler #2e exhaust through a common stack designated Stack #1. Boiler 2211-Boiler #1 exhausts through its own stack, Stack #2211. Boiler HO3-Boiler #1 exhausts through its own stack, Stack #6. Boilers HO3-Boiler #2 and HO3-Boiler #3 exhaust through a common stack designated Stack #7.

## 1. BPT Findings

The BPT emission limits for Boilers 2211-Boiler #1, HO2-Boiler #1a, HO2-Boiler #1b, HO2-Boiler #2a, HO2-Boiler #2b, HO2-Boiler #2c, HO2-Boiler #2d, HO2-Boiler #2e, HO2-Boiler #3, HO3-Boiler #1, HO3-Boiler #2, and HO3-Boiler #3 were based on the following:

PM/PM <sub>10</sub> /PM <sub>2.5</sub>	–	0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
SO <sub>2</sub>	–	0.6 lb/MMscf based on AP-42 Table 1.4-2 dated 7/98
NO <sub>x</sub>	–	100 lb/MMscf based on AP-42 Table 1.4-1 dated 7/98
CO	–	84 lb/MMscf based on AP-42 Table 1.4-1 dated 7/98
VOC	–	5.5 lb/MMscf based on AP-42 Table 1.4-2 dated 7/98
Visible	–	06-096 C.M.R. ch. 115, BPT
Emissions		

The BPT emission limits for Boilers 2211-Boiler #1, HO2-Boiler #1a, HO2-Boiler #1b, HO2-Boiler #2a, HO2-Boiler #2b, HO2-Boiler #2c, HO2-Boiler #2d, HO2-Boiler #2e, HO2-Boiler #3, HO3-Boiler #1, HO3-Boiler #2, and HO3-Boiler #3 are the following:

Unit	Pollutant	lb/MMBtu
HO2-Boiler #1a	PM	0.05
HO2-Boiler #1b	PM	0.05
HO3-Boiler #1	PM	0.05
HO3-Boiler #2	PM	0.05
HO3-Boiler #3	PM	0.05

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	PM <sub>2.5</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
2211-Boiler #1	0.05	0.05	0.05	0.01	0.10	0.08	0.01
HO2-Boiler #1a	0.18	0.18	0.18	0.01	0.34	0.28	0.02
HO2-Boiler #1b	0.18	0.18	0.18	0.01	0.34	0.28	0.02
HO2-Boiler #2a	0.11	0.11	0.11	0.01	0.20	0.17	0.01
HO2-Boiler #2b	0.11	0.11	0.11	0.01	0.20	0.17	0.01
HO2-Boiler #2c	0.11	0.11	0.11	0.01	0.20	0.17	0.01
HO2-Boiler #2d	0.11	0.11	0.11	0.01	0.20	0.17	0.01
HO2-Boiler #2e	0.11	0.11	0.11	0.01	0.20	0.17	0.01
HO2-Boiler #3	0.05	0.05	0.05	0.01	0.10	0.08	0.01
HO3-Boiler #1	0.23	0.23	0.23	0.01	0.44	0.37	0.02
HO3-Boiler #2	0.23	0.23	0.23	0.01	0.43	0.36	0.02
HO3-Boiler #3	0.23	0.23	0.23	0.01	0.43	0.36	0.02

## 2. Visible Emissions

Visible emissions from Stacks #1, #6, and #7 shall each not exceed 10% opacity on a six-minute block average basis.

3. New Source Performance Standards (NSPS): 40 C.F.R. Part 60, Subpart Dc

Due to their size, Boilers 2211-Boiler #1, HO2-Boiler #1a, HO2-Boiler #1b, HO2-Boiler #2a, HO2-Boiler #2b, HO2-Boiler #2c, HO2-Boiler #2d, HO2-Boiler #2e, HO2-Boiler #3, HO3-Boiler #1, HO3-Boiler #2, and HO3-Boiler #3 are not subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989. [40 C.F.R. § 60.40c]

4. National Emission Standards for Hazardous Air Pollutants (NESHAP): 40 C.F.R. Part 63, Subpart JJJJJ

Boilers 2211-Boiler #1, HO2-Boiler #1a, HO2-Boiler #1b, HO2-Boiler #2a, HO2-Boiler #2b, HO2-Boiler #2c, HO2-Boiler #2d, HO2-Boiler #2e, HO2-Boiler #3, HO3-Boiler #1, HO3-Boiler #2, and HO3-Boiler #3 are not subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63, Subpart JJJJJ. The units are considered gas fired units and are therefore exempt. [40 C.F.R. § 63.11195]

C. Generators

Unum operates five emergency generators. The emergency generators are generator sets with each gen set consisting of an engine and an electrical generator. Generators 2211-Generator #1A, HO2-Generator #2, HO3-Generator #3, Generator #4, and Generator #5 have engines rated at 1.4, 2.7, 1.0, 20.2, and 20.2 MMBtu/hr, respectively, firing distillate fuel. The emergency generators were manufactured in 2020, 2010, 1998, 2005, and 2005, respectively.

1. BPT Findings

The BPT emission limits for the generators are based on the following:

Generators 2211-Generator #1A, HO2-Generator #2, and HO3-Generator #3

PM/PM <sub>10</sub> /PM <sub>2.5</sub>	– 0.12 lb/MMBtu from 06-096 C.M.R. ch. 115, BPT
SO <sub>2</sub>	– Combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO <sub>x</sub>	– 4.41 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96
CO	– 0.95 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96
VOC	– 0.36 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96
Visible Emissions	– 06-096 C.M.R. ch. 101

Generator #4 and Generator #5

PM/PM <sub>10</sub> /PM <sub>2.5</sub>	– 0.12 lb/MMBtu from 06-096 C.M.R. ch. 103
SO <sub>2</sub>	– Combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO <sub>x</sub>	– 3.2 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
CO	– 0.85 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
VOC	– 0.09 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
Visible Emissions	– 06-096 C.M.R. ch. 101

The BPT emission limits for the generators are the following:

Unit	Pollutant	lb/MMBtu
Generator #4	PM	0.12
Generator #5	PM	0.12

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	PM <sub>2.5</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
2211-Generator #1A	0.17	0.17	0.17	0.01	6.17	1.33	0.50
HO2-Generator #2	0.32	0.32	0.32	0.01	11.91	2.57	0.97
HO3-Generator #3	0.12	0.12	0.12	0.01	4.41	0.95	0.36
Generator #4	2.42	2.42	2.42	0.04	64.64	17.17	1.82
Generator #5	2.42	2.42	2.42	0.04	64.64	17.17	1.82

Visible emissions from Generators HO3-Generator #3, Generator #4, and Generator #5 shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time Unum shall either meet the normal operating visible emissions standard or the following work practice standards and alternative visible emissions standard.

- The duration of the startup shall not exceed 30 minutes per event;
- Visible emissions shall not exceed 50% opacity on a six-minute block average basis; and
- Unum shall keep records of the date, time, and duration of each startup.

Use of the work practice standards and alternative visible emissions standard in lieu of the normal operating standard is limited to no more than once per day.

Note: This does not limit the engine to one startup per day. It only limits the use of the alternative emission standard to once per day.

Visible emissions from Generators 2211-Generator #1A and HO2 Generator #2 shall not exceed 20% opacity on a six-minute block average basis.

Generators HO3-Generator #3, Generator #4, and Generator #5 shall each be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. There is no limit on emergency operation. Each emergency generator shall be equipped with a non-resettable hour-meter to record operating time. To demonstrate compliance with the operating hours limit, Unum shall keep records of the total hours of operation and the hours of emergency operation for each unit.

Emergency generators are only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. Emergency generators are not to be used for prime power when reliable offsite power is available; nor to operate or to be contractually obligated to be available in a demand response program, during a period of deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity.

2. Chapter 169

Generators 2211-Generator #1A, HO2-Generator #2, HO3-Generator #3, Generator #4, and Generator #5 were installed prior to the effective date of *Stationary Generators*, 06-096 C.M.R. ch. 169 and are therefore exempt from this rule pursuant to section 1.

3. New Source Performance Standards (NSPS)

*Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, 40 C.F.R. Part 60, Subpart IIII is applicable to 2211-Generator #1A and HO2-Generator #2 since the units were ordered after July 11, 2005, and manufactured after April 1, 2006. [40 C.F.R. § 60.4200] By meeting the requirements of 40 C.F.R. Part 60, Subpart IIII, the units also meet 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)]

Due to the dates of manufacture of Generators HO3-Generator #3, Generator #4, and Generator #5, the engines are not subject to 40 C.F.R. Part 60, Subpart IIII since the units were manufactured prior to April 1, 2006. [40 C.F.R. § 60.4200]

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

a. Emergency Engine Designation and Operating Criteria

Under 40 C.F.R. Part 60, Subpart IIII, a stationary reciprocating internal combustion engine (ICE) is considered an **emergency** stationary ICE (emergency engine) as long as the engine is operated in accordance with the following criteria. Operation of an engine outside of the criteria specified below may cause the engine to no longer be considered an emergency engine under 40 C.F.R. Part 60,

Subpart IIII, resulting in the engine being subject to requirements applicable to **non-emergency** engines.

(1) Emergency Situation Operation (On-Site)

**There is no operating time limit on the use of an emergency engine to provide electrical power or mechanical work during an emergency situation.** Examples of use of an emergency engine during emergency situations include the following:

- Use of an engine to produce power for critical networks or equipment (including power supplied to portions of a facility) because of failure or interruption of electric power from the local utility (or the normal power source, if the facility runs on its own power production);
- Use of an engine to mitigate an on-site disaster;
- Use of an engine to pump water in the case of fire, flood, natural disaster, or severe weather conditions; and
- Similar instances.

(2) Non-Emergency Situation Operation

An emergency engine may be operated up to a maximum of 100 hours per calendar year for maintenance checks, readiness testing, and other non-emergency situations as described below.

- (i) An emergency engine may be operated 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 owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE more than 100 hours per calendar year.
- (ii) An emergency engine may be operated for up to 50 hours per calendar year for other non-emergency situations. **However, these operating hours are counted as part of the 100 hours per calendar year operating limit described in paragraph (2) and (2) (i) above.**



The 50 hours per calendar year operating limit for other non-emergency situations cannot be used for peak shaving, 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.

[40 C.F.R. §§ 60.4211(f) and 60.4219]

**b. 40 C.F.R. Part 60, Subpart IIII Requirements**

**(1) Manufacturer Certification Requirement**

The engines shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in 40 C.F.R. § 60.4202. [40 C.F.R. § 60.4205(b)]

**(2) Ultra-Low Sulfur Fuel Requirement**

The fuel fired in the engines shall not exceed 15 ppm sulfur (0.0015% sulfur). [40 C.F.R. § 60.4207(b)]

**(3) Non-Resettable Hour Meter Requirement**

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

**(4) Operation and Maintenance Requirements**

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

Unum shall have available for review by the Department a copy of the manufacturer's emission-related written instructions for engine operation and maintenance. [06-096 C.M.R. ch. 115, BPT]

**(5) Annual Time Limit for Maintenance and Testing**

As emergency engines, the units shall each be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, 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). [40 C.F.R. § 60.4211(f)]

**(6) Initial Notification Requirement**

No initial notification is required under 40 C.F.R. Part 60, Subpart IIII for emergency engines. [40 C.F.R. § 60.4214(b)]

(7) Recordkeeping

Unum shall keep records that include the hours of operation of each engine recorded through the 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 during each time.

[40 C.F.R. § 60.4214(b)]

4. National Emission Standards for Hazardous Air Pollutants (NESHAP):  
40 C.F.R. Part 63, Subpart ZZZZ

*National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 C.F.R. Part 63, Subpart ZZZZ is not applicable to Generators HO3-Generator #3, Generator #4, and Generator #5. The units are considered existing, emergency stationary reciprocating internal combustion engines at an area HAP source. However, they are considered exempt from the requirements of 40 C.F.R. Part 63, Subpart ZZZZ since they are categorized as commercial emergency engines and they do not operate or are not contractually obligated to be available in a demand response program, during a period of deviation from standard voltage or frequency, or for supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in 40 C.F.R. § 63.6640(f)(4)(ii).

Operation of any emergency engine in a demand response program, during a period of deviation from standard voltage or frequency, or for supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in 40 C.F.R. § 63.6640(f)(4)(ii), would cause the engine to be subject to 40 C.F.R. Part 63, Subpart ZZZZ and require compliance with all applicable requirements.

D. General Process Emissions

Visible emissions from any general process source shall not exceed 20% opacity on a six-minute block average basis.

E. Fugitive Emissions

Unum shall not cause emissions of any fugitive dust during any period of construction, reconstruction, or operation without taking reasonable precautions. Such reasonable precautions shall be included in the facility's continuing program of best management practices for suppression of fugitive particulate matter. See 06-096 C.M.R. ch. 101, § 4(C) for a list of potential reasonable precautions.

Unum shall not cause or allow visible emissions within 20 feet of ground level, measured as any level of opacity and not including water vapor, beyond the legal boundary of the

property on which such emissions occur. Compliance with this standard shall be determined pursuant to 40 C.F.R. Part 60, Appendix A, Method 22.

F. 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:

- Operating the boilers for 8,760 hr/yr each; and
- Operating the generators for 100 hrs/yr each.

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 <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Boilers	7.2	7.2	7.2	0.5	13.9	11.7	0.8
Generators	0.3	0.3	0.3	0.0	7.6	2.0	0.3
<b>Total TPY</b>	<b>7.5</b>	<b>7.5</b>	<b>7.5</b>	<b>0.5</b>	<b>21.5</b>	<b>13.7</b>	<b>1.0</b>

Pollutant	Tons/year
Single HAP	7.9
Total HAP	19.9

**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 <sub>10</sub>	25
PM <sub>2.5</sub>	15
SO <sub>2</sub>	50
NO <sub>x</sub>	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.

This determination is based on information provided by the applicant regarding licensed 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 Unum 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 A-657-71-P-R/M subject to the following conditions.

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

### **STANDARD CONDITIONS**

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S. § 347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to beginning actual construction of a modification, unless specifically provided for in Chapter 115.  
[06-096 C.M.R. ch. 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension

upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 C.M.R. ch. 115]

- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 C.M.R. ch. 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S. § 353-A. [06-096 C.M.R. ch. 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 C.M.R. ch. 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 C.M.R. ch. 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 C.M.R. ch. 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 C.M.R. ch. 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 C.M.R. ch. 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 C.F.R. Part 60 or other method approved or required by the Department, the licensee shall:
  - A. Perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
    1. Within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment

may be operating out of compliance with emission standards or license conditions;  
or

2. Pursuant to any other requirement of this license to perform stack testing.
  - B. Install or make provisions to install test ports that meet the criteria of 40 C.F.R. Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
  - C. Submit a written report to the Department within thirty (30) days from date of test completion.  
[06-096 C.M.R. ch. 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
  - A. Within thirty (30) days following receipt of the written test report by the Department, or another alternative timeframe approved by the Department, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 C.F.R. Part 60 or other method approved or required by the Department; and
  - B. The days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
  - C. The licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.  
[06-096 C.M.R. ch. 115]
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or license requirement. [06-096 C.M.R. ch. 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an

increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 C.M.R. ch. 115]

- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 C.M.R. ch. 115]
- (16) The licensee shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S. § 605). [06-096 C.M.R. ch. 115]

### SPECIFIC CONDITIONS

(17) **Boilers**

A. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
HO2-Boiler #1a	PM	0.05	06-096 C.M.R. ch. 115, BPT
HO2-Boiler #1b	PM	0.05	06-096 C.M.R. ch. 115, BPT
HO3-Boiler #1	PM	0.05	06-096 C.M.R. ch. 115, BPT
HO3-Boiler #2	PM	0.05	06-096 C.M.R. ch. 115, BPT
HO3-Boiler #3	PM	0.05	06-096 C.M.R. ch. 115, BPT

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

Emission Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	PM <sub>2.5</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
2211-Boiler #1	0.05	0.05	0.05	0.01	0.10	0.08	0.01
HO2-Boiler #1a	0.18	0.18	0.18	0.01	0.34	0.28	0.02
HO2-Boiler #1b	0.18	0.18	0.18	0.01	0.34	0.28	0.02
HO2-Boiler #2a	0.11	0.11	0.11	0.01	0.20	0.17	0.01
HO2-Boiler #2b	0.11	0.11	0.11	0.01	0.20	0.17	0.01
HO2-Boiler #2c	0.11	0.11	0.11	0.01	0.20	0.17	0.01
HO2-Boiler #2d	0.11	0.11	0.11	0.01	0.20	0.17	0.01
HO2-Boiler #2e	0.11	0.11	0.11	0.01	0.20	0.17	0.01
HO2-Boiler #3	0.05	0.05	0.05	0.01	0.10	0.08	0.01
HO3-Boiler #1	0.23	0.23	0.23	0.01	0.44	0.37	0.02
HO3-Boiler #2	0.23	0.23	0.23	0.01	0.43	0.36	0.02
HO3-Boiler #3	0.23	0.23	0.23	0.01	0.43	0.36	0.02

- C. Visible emissions from Stacks #1, #6, and #7 shall each not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

(18) **Generators**

- A. Generators HO3-Generator #3, Generator #4, and Generator #5 shall each be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 C.M.R. ch. 115, BPT]
- B. Unum shall keep records that include maintenance conducted on Generators HO3-Generator #3, Generator #4, and Generator #5 and the hours of operation of each engine recorded through the 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 the engine was in operation during each time. [06-096 C.M.R. ch. 115, BPT]
- C. The fuel sulfur content for Generators 2211-Generator #1A, HO2-Generator#2, HO3-Generator#3, Generator #4, and Generator #5 shall be limited to 0.0015% sulfur by weight. Compliance shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of the fuel in the tank on-site. [06-096 C.M.R. ch. 115, BPT]
- D. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Generator #4	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)
Generator #5	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)

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

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	PM <sub>2.5</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
2211-Generator #1A	0.17	0.17	0.17	0.01	6.17	1.33	0.50
HO2-Generator #2	0.32	0.32	0.32	0.01	11.91	2.57	0.97
HO3-Generator #3	0.12	0.12	0.12	0.01	4.41	0.95	0.36
Generator #4	2.42	2.42	2.42	0.04	64.64	17.17	1.82
Generator #5	2.42	2.42	2.42	0.04	64.64	17.17	1.82

F. **Visible Emissions**

1. Visible emissions from Generators HO3-Generator #3, Generator #4, and Generator #5 shall each not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time Unum shall either meet the normal operating visible emissions standard or the following work practice standards and alternative visible emissions standard.



- a. The duration of the startup shall not exceed 30 minutes per event;
- b. Visible emissions shall not exceed 50% opacity on a six-minute block average basis; and
- c. Unum shall keep records of the date, time, and duration of each startup.

Use of the work practice standards and alternative visible emissions standard in lieu of the normal operating standard is limited to no more than once per day.

Note: This does not limit the engine to one startup per day. It only limits the use of the alternative emission standard to once per day.

[06-096 C.M.R. ch. 101, § 4(A)(4)]

2. Visible emissions from Generators 2211-Generator #1A and HO2-Generator #2 shall each not exceed 20% opacity on a six-minute block average basis.  
[06-096 C.M.R. ch. 101, § 4(A)(4)]
- G. Generators HO3-Generator #3, Generator #4, and Generator #5 are only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. Emergency generators and/or fire pumps are not to be used for prime power when reliable offsite power is available; nor to operate or to be contractually obligated to be available in a demand response program, during a period of deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity. [06-096 C.M.R. ch. 115, BPT]
- H. Generators 2211-Generator #1A and HO2-Generator #2 shall meet the applicable requirements of 40 C.F.R. Part 60, Subpart IIII, including the following: [incorporated under 06-096 C.M.R. ch. 115, BPT]
  1. Manufacturer Certification  
The engines shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in § 60.4202.  
[40 C.F.R. § 60.4205(b)]
  2. Ultra-Low Sulfur Fuel  
The fuel fired in the engines shall not exceed 15 ppm sulfur (0.0015% sulfur). Compliance with the fuel sulfur content limit shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of the fuel in the tank on-site.  
[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 engine.  
[40 C.F.R. § 60.4209(a)]

4. Annual Time Limit for Maintenance and Testing

- a. As emergency engines, the units shall each be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, 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). These limits are based on a calendar year. Compliance shall be demonstrated by records (electronic or written log) of all engine operating hours.

[40 C.F.R. § 60.4211(f) and 06-096 C.M.R. ch. 115, BPT]

- b. Unum shall keep records that include the hours of operation of each engine recorded through the 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 during each time. [40 C.F.R. § 60.4214(b)]

5. Operation and Maintenance

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

Unum shall have available for review by the Department a copy of the manufacturer's emission-related written instructions for engine operation and maintenance. [06-096 C.M.R. ch. 115, BPT]

(19) **General Process Sources**

Visible emissions from any general process source shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(B)(4)]

(20) **Fugitive Emissions**

- A. Unum shall not cause emissions of any fugitive dust during any period of construction, reconstruction, or operation without taking reasonable precautions. Such reasonable precautions shall be included in the facility's continuing program of best management practices for suppression of fugitive particulate matter. See 06-096 C.M.R. ch. 101, § 4(C) for a list of potential reasonable precautions.

- B. Unum shall not cause or allow visible emissions within 20 feet of ground level, measured as any level of opacity and not including water vapor, beyond the legal

boundary of the property on which such emissions occur. Compliance with this standard shall be determined pursuant to 40 C.F.R. Part 60, Appendix A, Method 22.

[06-096 C.M.R. ch. 101, § 4(C)]

- (21) If the Department determines that any parameter value pertaining to construction and operation of the 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, Unum may be required to submit additional information. Upon written request from the Department, Unum 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 15<sup>th</sup> DAY OF OCTOBER, 2024.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:  for  
MELANIE LOYZIM, COMMISSIONER

**The term of this license shall be ten (10) years from the signature date above.**

[Note: If a renewal application, determined as complete by the Department, is submitted prior to expiration of this license, then pursuant to Title 5 M.R.S. § 10002, all terms and conditions of the license shall remain in effect until the Department takes final action on the license renewal application.]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 3/13/23

Date of application acceptance: 3/16/23

Date filed with the Board of Environmental Protection:

This Order prepared by Chris Ham, Bureau of Air Quality.

