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

University of New England **Cumberland County** **Portland, Maine** **A-111-71-P-A**	**Departmental** **Findings of Fact and Order** **Air Emission License** **Amendment #2**

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

The University of New England (UNE) was issued Air Emission License A-111-71-N-R/A on August 9, 2024, for the operation of emission sources associated with their educational facility. The license was subsequently amended on December 3, 2024 (A-111-71-O-A) to add Boilers #7, #8, and #9.

The equipment addressed in this license amendment is located at 716 Stevens Ave, Portland, Maine.

UNE has requested an amendment to their license in order to add a new emergency generator.

B. Emission Equipment

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

Stationary Engine

Equipment	Max. Input Capacity (MMBtu/hr)	Rated Output Capacity (kW)	Fuel Type	Firing Rate (gal/hr)	Date of Manuf.	Date of Install.
Generator #6	2.1	200	distillate fuel	14.8	2025	2025

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 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 Emissions Levels
PM	9.2	9.2	0.0	100
PM_{10}	9.2	9.2	0.0	100
$PM_{2.5}$	9.2	9.2	0.0	100
SO_2	0.5	0.5	0.0	100
NO_x	19.1	19.6	0.5	100
CO	12.9	13.0	0.1	100
VOC	1.3	1.3	0.0	50*

* UNE is located in an area of the state included in the Ozone Transport Region. Therefore, the significant emission level for VOC is 50 tpy.

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

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 UNE is subject to license restrictions that keep facility emissions below major source thresholds for NO_x; 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.

B. Generator #6

UNE operates Generator #6 as an emergency generator at the Campus Services Building. Generator #6 is a generator set consisting of an engine and an electrical generator. Generator #6 has an engine rated at 2.1 MMBtu/hr which fires distillate fuel and was manufactured in 2025.

1. BACT Findings

The BACT emission limits for Generator #6 are based on the following:

$PM/PM_{10}/PM_{2.5}$	–	0.12 b/MMBtu from 06-096 C.M.R. ch. 115 BACT
SO_2	–	Combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO_x	–	4.41 lb/MMBtu from AP-42 Table 3.3-1 dated 4/25
CO	–	0.95 lb/MMBtu from AP-42 Table 3.3-1 dated 4/25
VOC	–	0.36 lb/MMBtu from AP-42 Table 3.3-1 dated 4/25
Visible Emissions	–	06-096 C.M.R. ch. 101

The BACT emission limits for Generator #6 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)
Generator #6	0.26	0.26	0.26	0.01	9.27	2.00	0.19

Visible emissions from Generator #6 shall not exceed 20% opacity on a six-minute block average basis.

BACT for Generator #6 includes recordkeeping of all maintenance conducted on the engine.

2. Chapter 169

Stationary Generators, 06-096 C.M.R. ch. 169 (Chapter 169), is applicable to Generator #6 which is an emergency 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 Generator #6, UNE shall comply with the emission standards for emergency generators by complying with the applicable standards contained in 40 C.F.R. Part 60, Subpart IIII. [06-096 C.M.R. ch. 169, § 4(B)(1)]

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. [06-096 C.M.R. ch. 169, § 6]

There are no stack height requirements in Chapter 169 applicable to Generator #6 because it exhausts through its own stack and its rated output is less than 1,000 brake horsepower (747 kilowatts). [06-096 C.M.R. ch. 169, § 6]

3. New Source Performance Standards

Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 C.F.R. Part 60, Subpart IIII is applicable to the emergency engine listed above since the unit was 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 unit also 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 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 engine 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 engine 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 the engine. [40 C.F.R. § 60.4209(a)]

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

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

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:

- Operating the boilers for 8,760 hr/yr each, using the worst-case emission factors for their licensed fuels; and
- Operating the emergency 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_{10}	$PM_{2.5}$	SO_2	NO_x	CO	VOC
Boilers	9.1	9.1	9.1	0.4	16.8	12.3	1.1
Generators	0.1	0.1	0.1	0.1	2.8	0.7	0.2
Total TPY	**9.2**	**9.2**	**9.2**	**0.5**	**19.6**	**13.0**	**1.3**

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_{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 UNE 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-111-71-P-A subject to the conditions found in Air Emission License A-111-71-N-R/A, in amendment A-111-71-O-A, and the following conditions.

Severability. The invalidity or unenforceability of any provision of this License Amendment 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 shall replace Condition (18) of Air Emission License A-111-71-N-R/A:

(18) **Emergency Generators**

A. Generator #6 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]
Note: Operating hour restrictions for all other engines are addressed in the sections below.

B. UNE shall maintain records which demonstrate that Generator #2 is relocated and operated on a basis which maintains the classification of a non-road (portable) engine. [06-096 C.M.R. ch. 115, BPT]

C. UNE shall keep records of all maintenance conducted on the engines associated with Generators #1, #2, #3, #5, and #6. [06-096 C.M.R. ch. 115, BPT and BACT]

D. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
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 and BACT]:

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)
Generator #1	0.30	0.30	0.30	0.01	11.03	2.38	0.90
Generator #2	0.18	0.18	0.18	0.01	6.62	1.43	0.54
Generator #3	0.33	0.33	0.33	0.01	11.91	2.57	0.98
Generator #4	0.11	0.11	0.11	0.01	1.78	1.17	0.25
Generator #5	0.53	0.53	0.53	0.01	14.08	3.74	0.40
Generator #6	0.26	0.26	0.26	0.01	9.27	2.00	0.19

F. Visible Emissions

Visible emissions from Generators #1, #2, #3, #5, and #6 shall each not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(4)]

Visible emissions from Generator #4 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

G. Generators #1, #3, #5, and #6 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 and BACT]

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. UNE 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. UNE may only change those emission-related settings that are permitted by the manufacturer. [40 C.F.R. § 60.4211(a)]

   UNE 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]

H. Generator #4 shall meet the applicable requirements of 40 C.F.R. Part 60, Subpart JJJJ, including the following: [incorporated under 06-096 C.M.R. ch. 115, BPT]

1. Manufacturer Certification
   The engine shall be certified by the manufacturer as meeting the emission standards for new nonroad spark ignition engines found in 40 C.F.R. Part 60, Subpart JJJJ, Table 1.

2. Non-Resettable Hour Meter
   A non-resettable hour meter shall be installed and operated on the engine. [40 C.F.R. § 60.4237 and 06-096 C.M.R. ch. 115, BPT]

3. Annual Time Limit for Maintenance and Testing

   a. As an emergency engine, the unit shall 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). The 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. § 60.4243(d) and 06-096 C.M.R. ch. 115, BPT]

   b. UNE shall keep records that include maintenance conducted on the engine and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the number of hours the unit operated for emergency purposes, the number of hours the unit operated for non-emergency purposes, and the reason the engine was in operation during each time. [40 C.F.R. § 60.4245(b)]

4. Operation and Maintenance
   The engine shall be operated and maintained according to the manufacturer's written instructions or procedures developed by UNE that are approved by the engine manufacturer. UNE may only change those settings that are permitted by the manufacturer. [40 C.F.R. § 60.4243]

UNE 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]

DONE AND DATED IN AUGUSTA, MAINE THIS 14th DAY OF JULY, 2025.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____ for ____
MELANIE LOYZIM, COMMISSIONER

The term of this license amendment shall be ten (10) years from the issuance of Air Emission License A-111-71-N-R/A (issued 8/9/2024).

[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: 5/8/2025
Date of application acceptance: 5/8/2025

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