



DEPARTMENT ORDER

**Northern Maine Medical Center  
 Aroostook County  
 Fort Kent, Maine  
 A-130-71-Q-R/A**

**Departmental  
 Findings of Fact and Order  
 Air Emission License  
 Renewal and Amendment**

**FINDINGS OF FACT**

After review of the air emission license renewal and 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

Northern Maine Medical Center (NMMC) has applied to renew their Air Emission License for the operation of emission sources associated with their health care facility. NMMC has also applied to add two existing boilers to the license, which are located at the existing nursing home. The property where these boilers are located was not previously contiguous to the property of the licensed facility. However, NMMC recently purchased property between these two properties, making these boilers on contiguous property. Therefore, these existing boilers are being added to the license.

The equipment addressed in this license is located at 194 East Main Street, Fort Kent, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

**Boilers**

<b>Equipment</b>	<b>Max. Capacity (MMBtu/hr)</b>	<b>Maximum Firing Rate</b>	<b>Fuel Type</b>	<b>Date of Manuf.</b>	<b>Date of Install.</b>	<b>Stack #</b>
Boiler #1	9.5	2,026 lb/hr	Biomass	2012	2012	1
Boiler #2	4.2	30.0 gal/hr	Distillate fuel	2012	2012	2
Boiler #3	4.2	30.0 gal/hr	Distillate fuel	2012	2012	2
Existing Forest Hill Boiler #4*	1.1	8.0 gal/hr	Distillate fuel	2001	2001	Smith 1
Existing Forest Hill Boiler #5*	1.1	8.0 gal/hr	Distillate fuel	2004	2004	Smith 2
Forest Hill Boiler #1	3.5	38.3 gal/hr	Propane	2023	2024	Forest Hill 1
Forest Hill Boiler #2	3.5	38.3 gal/hr	Propane	2023	2024	Forest Hill 2

\* New to license

**Stationary Engines**

Equipment	Max. Input Capacity (MMBtu/hr)	Rated Output Capacity (kW)	Fuel Type	Firing Rate (gal/hr)	Date of Manuf.	Date of Install.
Generator #1	4.0	400	Distillate fuel	29.2	2000	2000
Generator #2	2.7	250	Distillate fuel	19.4	2014	2014
Generator #3	4.7	500	Distillate fuel	34.4	2021	2021
Generator #4	1.8	175	Distillate fuel	13.1	2003	2003
Generator #5	1.4	125	Distillate fuel	10.3	2020	2020
Generator #6	4.7	500	Distillate fuel	34.4	2023	2024

NMMC 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, NMMC 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.

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.

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.

NMMC has applied to renew currently licensed emission units as well as modify their license as addressed in Section I(A) above.

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	6.1	8.7	2.6	100
PM <sub>10</sub>	6.5	9.1	2.6	100
PM <sub>2.5</sub>	6.5	9.1	2.6	100
SO <sub>2</sub>	1.1	1.1	--	100
NO <sub>x</sub>	14.9	22.6	7.7	100
CO	7.7	11.0	3.3	100
VOC	2.8	4.6	1.8	100

Therefore, this license is considered to be both a renewal and a minor modification 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 fuel limit on the boilers and the 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 NMMC 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 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. Boilers

NMMC operates seven boilers for heat and hot water, Boilers #1, #2, #3, Existing Forest Hill Boilers #4 and #5, and Forest Hill Boilers #1 and #2. Boiler #1 is rated at 9.5 MMBtu/hr and fires clean biomass fuel with a moisture content of approximately 45%. The boiler was manufactured and installed in 2012 and exhausts through its own stack, Stack #1. Boiler #1 also has an oxygen trim system.

Boilers #2 and #3 are each rated at 4.2 MMBtu/hr and fire distillate fuel. These boilers were each manufactured and installed in 2012 and exhaust through a common stack, Stack #2.

Existing Forest Hill Boilers #4 and #5, which are being added to the license, are each rated at 1.1 MMBtu/hr and fire distillate fuel. Existing Forest Hill Boiler #4 was manufactured and installed in 2001. Existing Forest Hill Boiler #5 was manufactured and installed in 2004. Existing Forest Hill Boilers #4 and #5 each exhaust through their own stacks, Smith 1 and 2 Stacks, respectively.

Forest Hill Boilers #1 and #2 are each rated at 3.5 MMBtu/hr and fire propane. These boilers were each manufactured in 2023 and installed in 2024. Forest Hill Boilers #1 and #2 exhaust through their own stacks, Forest Hill 1 and 2 Stacks, respectively.

1. BPT Findings (Boilers #1, #2, and #3, and Forest Hill Boilers #1 and #2)

The BPT emission limits for Boiler #1, #2, and #3, and Forest Hill Boilers #1 and #2 were based on the following:

Biomass (Boiler #1)

PM	– 0.2 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT A-130-71-L-A (9/27/2012)
PM <sub>10</sub>	– 0.217 lb/MMBtu based on AP-42 Table 1.6-1 dated 4/2022
PM <sub>2.5</sub>	– 0.137 lb/MMBtu based on AP-42 Table 1.6-1 dated 4/2022
SO <sub>2</sub>	– 0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT A-130-71-L-A (9/27/2012)
NO <sub>x</sub>	– 0.32 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT A-130-71-L-A (9/27/2012)
CO	– 0.19 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT A-130-71-L-A (9/27/2012)
VOC	– 0.1 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT A-130-71-L-A (9/27/2012)
Visible Emissions	– 06-096 C.M.R. ch. 115, BPT

Distillate Fuel (Boilers #2 and #3)

PM/PM <sub>10</sub> /PM <sub>2.5</sub>	– 0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT (A-130-71-L-A, 9/27/2012)
SO <sub>2</sub>	– based on firing distillate fuel with a maximum sulfur content of 0.0015% by weight
NO <sub>x</sub>	– 0.16 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT (A-130-71-L-A, 9/27/2012)
CO	– 0.074 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT (A-130-71-L-A, 9/27/2012)
VOC	– 0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT (A-130-71-L-A, 9/27/2012)

Visible Emissions – 06-096 C.M.R. ch. 101 §§ 4(A)(2) and 4(D)(1)

Propane (Forest Hill Boilers #1 and #2)

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> – 0.054 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08  
NO<sub>x</sub> – 13 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08  
CO – 7.5 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08  
VOC – 1 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08  
Visible Emissions – 06-096 C.M.R. ch. 101 § 4(A)(3)

The BPT emission limits for Boiler #1, #2, and #3, and Forest Hill Boilers #1 and #2 are the following:

Unit	Pollutant	lb/MMBtu
Boiler #1	PM	0.2
Boiler #2	PM	0.05
Boiler #3	PM	0.05
Forest Hill Boiler #1	PM	0.05
Forest Hill Boiler #2	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)
Boiler #1	1.89	2.05	2.05	0.47	3.03	1.80	0.95
Boiler #2	0.21	0.21	0.21	0.01	0.67	0.31	0.21
Boiler #3	0.21	0.21	0.21	0.01	0.67	0.31	0.21
Forest Hill Boiler #1	0.18	0.18	0.18	0.002	0.50	0.29	0.04
Forest Hill Boiler #2	0.18	0.18	0.18	0.002	0.50	0.29	0.04

NMMC shall be limited to 45,000 MMBtu/year for Boiler #1 on a calendar year total basis. When converting fuel use to MMBtu, NMMC shall use a heating value of 0.00495 MMBtu/lb for biomass.

NMMC shall operate the oxygen trim system installed on Boiler #1 according to the manufacturer’s instructions.

2. BACT Findings (Existing Forest Hill Boilers #4 and #5)

Following is a BACT analysis for control of emissions from Existing Forest Hill Boilers #4 and #5.

a. Particulate Matter (PM, PM<sub>10</sub>, PM<sub>2.5</sub>)

NMMC has proposed to burn only low-ash content fuels (distillate fuel) in the boilers. Additional add-on pollution controls are not economically feasible.

BACT for PM/PM<sub>10</sub>/PM<sub>2.5</sub> emissions from Existing Forest Hill Boilers #4 and #5 is the use of ultra-low-sulfur distillate fuel and the emission limits listed in the tables below.

b. Sulfur Dioxide (SO<sub>2</sub>)

NMMC has proposed to fire only distillate fuel with a sulfur content not to exceed 0.0015% by weight. The use of these fuels results in minimal emissions of SO<sub>2</sub>, and additional add-on pollution controls are not economically feasible.

BACT for SO<sub>2</sub> emissions from Existing Forest Hill Boilers #4 and #5 is the use of ultra-low-sulfur distillate fuel and the emission limits listed in the tables below.

c. Nitrogen Oxides (NO<sub>x</sub>)

NMMC considered several control strategies for the control of NO<sub>x</sub> including Selective Catalytic Reduction (SCR), Selective Non-Catalytic Reduction (SNCR), water/steam injection, and flue gas recirculation (FGR).

Both SCR and SNCR are technically feasible control technologies for minimizing NO<sub>x</sub>. Both methods include injection of a NO<sub>x</sub> reducing agent, typically ammonia or urea, into the boiler combustion gases, where the reagent reacts with NO<sub>x</sub> to form nitrogen and water. Each technology is effective within a specific temperature range, 500 – 1,200 °F for SCR and 1,400 – 1,600 °F for SNCR. However, both SCR and SNCR have the negative environmental impact of emissions of unreacted ammonia. In addition, due to the initial capital cost and the annual operating costs, these systems are typically only considered cost effective for units larger than Existing Forest Hill Boilers #4 and #5.

Water/steam injection and FGR can attain similar NO<sub>x</sub> reduction efficiencies through lowering burner flame temperature and thereby reducing thermal NO<sub>x</sub> formation. However, both control strategies reduce the boiler's fuel efficiency.

BACT for NO<sub>x</sub> emissions from Existing Forest Hill Boilers #4 and #5 is the emission limits listed in the tables below.

d. Carbon Monoxide (CO) and Volatile Organic Compounds (VOC)

NMMC considered several control strategies for the control of CO and VOC including oxidation catalysts, and thermal oxidizers.

Oxidation catalysts and thermal oxidizers both have high capital, maintenance, and operational costs considering the size of the boiler in question. These controls were determined to be economically infeasible.

BACT for CO and VOC emissions from Existing Forest Hill Boilers #4 and #5 is the emission limits listed in the tables below.

e. Emission Limits

The BACT emission limits for Existing Forest Hill Boilers #4 and #5 were based on the following:

Distillate Fuel

- PM – 0.08 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
- SO<sub>2</sub> – based on firing distillate fuel with a maximum sulfur content of 0.0015% by weight
- NO<sub>x</sub> – 20 lb/1,000 gal based on AP-42 Table 1.3-1 dated 5/10
- CO – 5 lb/1,000 gal based on AP-42 Table 1.3-1 dated 5/10
- VOC – 0.34 lb/1,000 gal based on AP-42 Table 1.3-3 dated 5/10
- Visible Emissions – 06-096 C.M.R. ch. 101 § 4(A)(2)

The BACT emission limits for Existing Forest Hill Boilers #4 and #5 are the following:

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)
Existing Forest Hill Boiler #4	0.09	0.09	0.09	0.002	0.16	0.04	0.003
Existing Forest Hill Boiler #5	0.09	0.09	0.09	0.002	0.16	0.04	0.003

3. Visible Emissions

a. Boiler #1

Chapter 101

Visible emissions from Boiler #1 (Stack #1) shall not exceed 30% opacity on a six-minute block average basis, except for periods of startup, shutdown, or malfunction during which time NMMC shall either meet the normal operating visible emissions standard or the following alternative visible emissions standard.

During periods of startup, shutdown, or malfunction, visible emissions shall not exceed 40% opacity on a six-minute block average basis. This alternative visible emissions standard shall not be utilized for more than two hours (20 consecutive six-minute block averages) per event. If this alternative visible emissions standard is utilized, NMMC shall keep records of the date, time, and duration of all startup,

shutdown, and malfunction events and provide them to the Department upon request.

[06-096 C.M.R. ch. 101, § 4(A)(5)(a)]

Chapter 115, BPT

Visible Emission from Boiler #1 (Stack #1) shall not exceed 20% on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT, from license A-130-71-N-R, September 3, 2014]

Streamlining

The Department has determined that the BPT visible emission limit is more stringent than the applicable limit in 06-096 C.M.R. ch. 101. Therefore, the visible emission limit for Boiler #1 (Stack #1) has been streamlined to the more stringent BPT limit, and only this more stringent limit shall be included in the air emission license.

b. Boilers #2, #3, #4, and #5

Visible emissions from Boilers #2 and #3 (Stack #2) shall not exceed 20% opacity on a six-minute block average basis.

Visible emissions from Existing Forest Hill Boiler #4 (Smith 1 Stack) shall not exceed 20% opacity on a six-minute block average basis.

Visible emissions from Existing Forest Hill Boiler #5 (Smith 2 Stack) shall not exceed 20% opacity on a six-minute block average basis.

c. Forest Hill Boilers #1 and #2

Visible emissions from Forest Hill Boiler #1 (Forest Hill 1 Stack) shall not exceed 10% opacity on a six-minute block average basis.

Visible emissions from Forest Hill Boiler #2 (Forest Hill 2 Stack) shall not exceed 10% opacity on a six-minute block average basis.

4. Periodic Monitoring

Periodic monitoring for Boiler #1 shall include recordkeeping to document fuel use both on a monthly and calendar year total basis. Documentation shall include the type of fuel used.

Periodic monitoring for Boilers #2, #3, #4, and #5 shall include recordkeeping to document the sulfur content of the distillate fuel. Documentation shall include the type of fuel used and sulfur content of the fuel.

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

Due to their size, Boilers #1, #2, #3, #4, and #5 and Forest Hill Boilers #1 and #2 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]

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

Boilers #1, #2, #3, #4, and #5 are 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 (Subpart JJJJJ). Forest Hill Boilers #1 and #2 are not subject to Subpart JJJJJ, because they are gas-fired boilers, which are exempt. Boiler #1 is considered a new biomass boiler rated less than 10 MMBtu/hr. Boilers #2, #3, #4, and #5 are considered new oil boilers rated less than 5 MMBtu/hr [40 C.F.R. §§ 63.11193 and 63.11195]

Applicable federal 40 C.F.R. Part 63, Subpart JJJJJ requirements include the following. Additional rule information can be found on the following website: <https://www.epa.gov/stationary-sources-air-pollution/compliance-industrial-commercial-and-institutional-area-source>.

a. Compliance Dates, Notifications, and Work Practice Requirements

(1) Boiler Tune-Up Program

- (i) A boiler tune-up program shall be implemented. [40 C.F.R. § 63.11223]
- (ii) Tune-ups shall be conducted at a frequency specified by the rule and based on the size, age, and operations of the boiler. See chart below:

<b>Boiler Category</b>	<b>Tune-Up Frequency</b>
Biomass-fired boiler (Boiler #1) with oxygen-trim system	Every 5 years
Distillate fuel- fired boilers with a heat input capacity of $\leq$ 5MMBtu/hr (Boilers #2 and #3, and Existing Forest Hill Boilers #4 and #5)	Every 5 years

[40 C.F.R. § 63.11223(a) and Table 2]

(iii) The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:

1. As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for each boiler. [40 C.F.R. § 63.11223(b)(1)]
2. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 C.F.R. § 63.11223(b)(2)]
3. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for each boiler. [40 C.F.R. § 63.11223(b)(3)]
4. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]
5. Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 C.F.R. § 63.11223(b)(5)]
6. If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up. [40 C.F.R. § 63.11223(b)(7)]

(iv) Tune-Up Report: A tune-up report shall be maintained onsite and, submitted to the Department and/or EPA upon request. The report shall contain the following information:

1. The concentration of CO in the effluent stream (ppmv) and oxygen (volume percent) measured at high fire or typical operating load both **before** and **after** the boiler tune-up;
2. A description of any corrective actions taken as part of the tune-up of the boiler; and
3. The types and amounts of fuels used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. [40 C.F.R. § 63.11223(b)(6)]

(2) Compliance Report

For every five-year compliance period, NMMC shall prepare a compliance report by March 1<sup>st</sup> of the following year to document the information below for the five-year period. The report shall be maintained by the source and submitted to the Department and/or to the EPA upon request. The report must include the items contained in §§ 63.11225(b)(1) and (2), including the following: [40 C.F.R. § 63.11225(b)]

- (i) Company name and address;
- (ii) A statement of whether the source has complied with all the relevant requirements of this Subpart;
- (iii) A statement certifying truth, accuracy, and completeness of the notification and signed by a responsible official and containing the official's name, title, phone number, email address, and signature;
- (iv) The following certifications, as applicable:
  1. "This facility complies with the requirements in 40 C.F.R. § 63.11223 to conduct tune-ups of each boiler in accordance with the frequency specified in this Subpart."
  2. "No secondary materials that are solid waste were combusted in any affected unit."
  3. "This facility complies with the requirement in §§ 63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available."

b. Recordkeeping

- (1) Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart JJJJJ including the following [40 C.F.R. § 63.11225(c)]:
  - (i) Copies of notifications and reports with supporting compliance documentation;
  - (ii) Identification of each boiler, the date of tune-up, procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned;
  - (iii) Records of the occurrence and duration of each malfunction of each applicable boiler; and
  - (iv) Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler.
- (2) Records shall be in a form suitable and readily available for expeditious review. Each record must be kept for 5 years following the date of each recorded action. Each record must be kept on-site or be accessible from a central location by computer or other means that instantly provides access at the site for at least

2 years after the date of each recorded action. The records may be maintained off-site for the remaining 3 years. [40 C.F.R. § 63.11225(d)] Note: Standard Condition (8) of this license requires all records be retained for six years; therefore, the five-year record retention requirement of Subpart JJJJJ shall be streamlined to the more stringent six-year requirement.

C. Emergency Generators

NMMC operates six emergency generators, Generators #1, #2, #3, #4, #5, and #6. The emergency generators are generator sets with each gen set consisting of an engine and an electrical generator. Generators #1, #2, #3, #4, #5, and #6 have engines rated at 4.0 MMBtu/hr, 2.7 MMBtu/hr, 4.7 MMBtu/hr, 1.8 MMBtu/hr, 1.4 MMBtu/hr, and 4.7 MMBtu/hr, respectively, which fire distillate fuel. Generators #1, #2, #3, #4, and #5 were manufactured and installed in 2000, 2014, 2021, 2003, and 2020, respectively. Generator #6 was manufactured in 2023 and installed in 2024.

1. BPT Findings

The BPT emission limits for Generators #1, #2, #3, #4, #5, and #6 are based on the following:

- PM/PM<sub>10</sub>/PM<sub>2.5</sub> – 0.12 lb/MMBtu from 06-096 C.M.R. ch. 103 for Generators #1, #3, and #6; ch. 115, BPT for Generators #2, #4, and #5
- 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 3.4-1 dated 10/96 for Generators #3 and #6  
4.41 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96 for Generators #1, #2, #4, and #5
- CO – 0.85 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96 for Generators #3, and #6  
0.95 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96 for Generators #1, #2, #4, and #5
- VOC – 0.09 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96 for Generators #3 and #6  
0.36 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96 for Generators #1, #2, #4, and #5
- Visible Emissions – 06-096 C.M.R. ch. 101 § 4(A)(4)

The BPT emission limits for Generators #1, #2, #3, #4, #5, and #6 are the following:

Unit	Pollutant	lb/MMBtu
Generator #1	PM	0.12
Generator #3	PM	0.12
Generator #6	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)
Generator #1	0.48	0.48	0.48	0.01	17.64	3.80	1.44
Generator #2	0.32	0.32	0.32	0.004	11.72	2.53	0.96
Generator #3	0.57	0.57	0.57	0.01	15.08	4.01	0.42
Generator #4	0.22	0.22	0.22	0.003	7.94	1.71	0.65
Generator #5	0.17	0.17	0.17	0.002	6.22	1.34	0.51
Generator #6	0.57	0.57	0.57	0.01	15.08	4.01	0.42

BPT for the emergency generators includes recordkeeping of all maintenance conducted on each engine.

## 2. Visible Emissions

### Generators #1 and #4

Visible emissions from Generators #1 and #4 shall each not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time NMMC 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. NMMC 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.

### Generators #2, #3, #5, and #6

Visible emissions from Generators #2, #3, #5, and #6 shall each not exceed 20% opacity on a six-minute block average basis.

3. Chapter 169

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

Generator #6 is subject to Chapter 169. It 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, NMMC 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]

4. New Source Performance Standards

Due to the dates of manufacture of Generators #1 and #4, these engines are not subject to the New Source Performance Standards (NSPS) *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE)*, 40 C.F.R. Part 60, Subpart IIII (Subpart IIII) since these units were manufactured prior to April 1, 2006. [40 C.F.R. § 60.4200] Generators #2, #3, #5, and #6 are subject to Subpart IIII since these units were ordered after July 11, 2005, and manufactured after 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 applicable to Generators #2, #3, #5, and #6 is listed below.

a. Emergency Engine Designation and Operating Criteria

Under 40 C.F.R. Part 60, Subpart III, 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 III, 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 III 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. NMMC may only change those emission-related settings that are permitted by the manufacturer. [40 C.F.R. § 60.4211(a)]

NMMC 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

NMMC 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. 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 any of the emergency engines listed above. 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 residential, commercial, or institutional 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.

6. Best Practical Treatment: Generators #1 and #4

Generators #1 and #4 are not subject to either NSPS or NESHAP requirements, as discussed in the above sections. Generators #1 and #4 are subject to the following BPT requirements:

Generators #1 and #4 shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. There is no limit on emergency operation. The emergency generators shall be equipped with a non-resettable hour-meter to record operating time. To demonstrate compliance with the operating

hours limit, NMMC shall keep records of the total hours of operation and the hours of emergency operation for each unit.

Generators #1 and #4 are only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. The 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.

[06-096 C.M.R. ch. 115, BPT]

D. 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:

- Firing 45,000 MMBtu/yr of biomass in Boiler #1;
- Operating Boilers #2, #3, #4, and #5 and Forest Hill Boilers #1 and #2 for 8,760 hr/yr, each; and
- Operating Generators #1, #2, #3, #4, #5, and #6 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
Boiler #1	4.5	4.9	3.1	1.1	7.2	4.3	2.3
Boiler #2	0.9	0.9	0.9	--	2.9	1.4	0.9
Boiler #3	0.9	0.9	0.9	--	2.9	1.4	0.9
Existing Forest Hill Boiler #4*	0.4	0.4	0.4	--	0.7	0.2	--
Existing Forest Hill Boiler #5*	0.4	0.4	0.4	--	0.7	0.2	--
Forest Hill Boiler #1	0.8	0.8	0.8	--	2.2	1.3	0.2
Forest Hill Boiler #2	0.8	0.8	0.8	--	2.2	1.3	0.2

	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Generator #1	--	--	--	--	0.9	0.2	0.1
Generator #2	--	--	--	--	0.6	0.1	--
Generator #3	--	--	--	--	0.8	0.2	--
Generator #4	--	--	--	--	0.4	0.1	--
Generator #5	--	--	--	--	0.3	0.1	--
Generator #6	--	--	--	--	0.8	0.2	--
<b>Total TPY</b>	<b>8.7</b>	<b>9.1</b>	<b>7.3</b>	<b>1.1</b>	<b>22.6</b>	<b>11.0</b>	<b>4.6</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 renewal and amendment.

This determination is based on information provided by the applicant regarding the operation of licensed and 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 NMMC 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 Renewal and Amendment A-130-71-Q-R/A subject to the following conditions.

Severability. The invalidity or unenforceability of any provision of this License Renewal and Amendment or part thereof shall not affect the remainder of the provision or any other provisions. This License

### 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 (Boilers #1, #2, #3, #4, and #5 and Forest Hill Boilers #1 and #2)**

A. Fuel

1. Boiler #1 is licensed to fire clean biomass fuel with a moisture content of approximately 45%. Total fuel use for Boiler #1 shall not exceed 45,000 MMBtu/year. When converting fuel use to MMBtu, NMMC shall use a heating value of 0.00495 MMBtu/lb for biomass. [06-096 C.M.R. ch. 115, BPT]
2. Boilers #2, #3, #4, and #5 are licensed to fire distillate fuel. The facility shall not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm). [06-096 C.M.R. ch. 115, BPT and BACT]
3. Forest Hill Boilers #1 and #2 are licensed to fire propane. [06-096 C.M.R. ch. 115, BPT]
4. Compliance shall be demonstrated by fuel records showing the quantity, type, and the percent sulfur of the fuel delivered or fuel used (if applicable). Records of annual fuel use for Boiler #1 shall be kept on a monthly and calendar year total basis. Fuel sulfur content compliance shall be demonstrated by fuel delivery receipts from the supplier, a statement from the supplier that the fuel delivered meets Maine’s fuel sulfur content standards, certificate of analysis, or testing of fuel in the tank on-site. [06-096 C.M.R. ch. 115, BPT and BACT]

B. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #1	PM	0.2	06-096 C.M.R. ch. 115, BACT, A-130-71-L-A (9/27/2012)
Boiler #2	PM	0.05	06-096 C.M.R. ch. 115, BACT, A-130-71-L-A (9/27/2012)
Boiler #3	PM	0.05	06-096 C.M.R. ch. 115, BACT, A-130-71-L-A (9/27/2012)
Forest Hill Boiler #1	PM	0.05	06-096 C.M.R. ch. 115, BPT
Forest Hill Boiler #2	PM	0.05	06-096 C.M.R. ch. 115, BPT

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

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)
Boiler #1	1.89	2.05	2.05	0.47	3.03	1.80	0.95
Boiler #2	0.21	0.21	0.21	0.01	0.67	0.31	0.21

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)
Boiler #3	0.21	0.21	0.21	0.01	0.67	0.31	0.21
Existing Forest Hill Boiler #4	0.09	0.09	0.09	0.002	0.16	0.04	0.003
Existing Forest Hill Boiler #5	0.09	0.09	0.09	0.002	0.16	0.04	0.003
Forest Hill Boiler #1	0.18	0.18	0.18	0.002	0.50	0.29	0.04
Forest Hill Boiler #2	0.18	0.18	0.18	0.002	0.50	0.29	0.04

D. Visible Emissions

1. Boiler #1

Visible Emission from Stack #1 shall not exceed 20% on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT from license A-130-71-N-R, September 3, 2014]

2. Boilers #2, #3, #4, and #5 [06-096 C.M.R. ch. 101, §§ 4(A)(2) and 4(D)(1)]

Visible emissions from Boilers #2 and #3 (Stack #2) shall not exceed 20% opacity on a six-minute block average basis.

Visible emissions from Existing Forest Hill Boiler #4 (Smith 1 Stack) shall not exceed 20% opacity on a six-minute block average basis.

Visible emissions from Existing Forest Hill Boiler #5 (Smith 2 Stack) shall not exceed 20% opacity on a six-minute block average basis.

3. Forest Hill Boilers #1 and #2 [06-096 C.M.R. ch. 101, § 4(A)(3)]

Visible emissions from Forest Hill Boiler #1 (Forest Hill 1 Stack) shall not exceed 10% opacity on a six-minute block average basis.

Visible emissions from Forest Hill Boiler #2 (Forest Hill 2 Stack) shall not exceed 10% opacity on a six-minute block average basis.

E. NMMC shall comply with all requirements of 40 C.F.R. Part 63, Subpart JJJJJ applicable to Boilers #1, #2, #3, #4, and #5 including, but not limited to, the following: [incorporated under 06-096 C.M.R. ch. 115, BPT/BACT]

1. The facility shall implement a boiler tune-up program. [40 C.F.R. § 63.11223]
  - a. Each tune-up shall be conducted at a frequency specified by the rule and based on the size, age, and operations of the boiler. See chart below:

<b>Boiler Category</b>	<b>Tune-Up Frequency</b>
Biomass-fired boiler (Boiler #1) with oxygen trim system	Every 5 years
Distillate fuel- fired boilers with a heat input capacity of $\leq 5$ MMBtu/hr (Boilers #2, #3, #4 and #5)	Every 5 years

[40 C.F.R. § 63.11223(a) and Table 2]

- b. The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:
  - (1) As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for each boiler. [40 C.F.R. § 63.11223(b)(1)]
  - (2) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 C.F.R. § 63.11223(b)(2)]
  - (3) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for each boiler. [40 C.F.R. § 63.11223(b)(3)]
  - (4) Optimize total emissions of CO, consistent with manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]
  - (5) Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 C.F.R. § 63.11223(b)(5)]
  - (6) If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up. [40 C.F.R. § 63.11223(b)(7)]

- c. Tune-Up Report: A tune-up report shall be maintained onsite and submitted to the Department and EPA upon request. The report shall contain the following information:
  - (1) The concentration of CO in the effluent stream (ppmv) and oxygen (volume percent) measured at high fire or typical operating load both **before** and **after** the boiler tune-up;
  - (2) A description of any corrective actions taken as part of the tune-up of the boiler; and
  - (3) The types and amounts of fuels used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. [40 C.F.R. § 63.11223(b)(6)]

## 2. Compliance Report

For every five-year compliance period, NMMC shall prepare a compliance report by March 1<sup>st</sup> of the following year to document the information below for the five year period. The report shall be maintained by the source and submitted to the Department and/or to the EPA upon request. The report must include the items contained in §§ 63.11225(b)(1) and (2), including the following: [40 C.F.R. § 63.11225(b)]

- a. Company name and address;
- b. A statement of whether the source has complied with all the relevant requirements of this Subpart;
- c. A statement certifying truth, accuracy, and completeness of the notification and signed by a responsible official and containing the official's name, title, phone number, email address, and signature;
- d. The following certifications, as applicable:
  - (1) "This facility complies with the requirements in 40 C.F.R. § 63.11223 to conduct tune-ups of each boiler in accordance with the frequency specified in this Subpart."
  - (2) "No secondary materials that are solid waste were combusted in any affected unit."
  - (3) "This facility complies with the requirement in §§ 63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available."

3. Recordkeeping

- a. Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart JJJJJ including the following [40 C.F.R. § 63.11225(c)]:
  - (1) Copies of notifications and reports with supporting compliance documentation;
  - (2) Identification of each boiler, the date of tune-up, procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned;
  - (3) Records of the occurrence and duration of each malfunction of each applicable boiler; and
  - (4) Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler.
- b. Records shall be in a form suitable and readily available for expeditious review. Each record must be kept for 5 years following the date of each recorded action. Each record must be kept on-site or be accessible from a central location by computer or other means that instantly provides access at the site for at least 2 years after the date of each recorded action. The records may be maintained off-site for the remaining 3 years. [40 C.F.R. § 63.11225(d)] Note: Standard Condition (8) of this license requires all records be retained for six years; therefore, the five-year record retention requirement of Subpart JJJJJ shall be streamlined to the more stringent six-year requirement.

(18) **Emergency Generators (Generators #1, #2, #3, #4, #5, and #6)**

- A. Generators #1, #2, #3, #4, #5, and #6 are licensed to fire distillate fuel [06-096 C.M.R. ch. 115, BPT]
- B. Generators #1 and #4 shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. There is no limit on emergency operation. The emergency generators shall be equipped with a non-resettable hour-meter to record operating time. To demonstrate compliance with the operating hours limit, NMMC shall keep records of the total hours of operation and the hours of emergency operation for each unit.
- C. Generators #1 and #4 are only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. The 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.

D. NMMC shall keep records of all maintenance conducted on the engines associated with Generators #1, #2, #3, #4, #5, and #6. [06-096 C.M.R. ch. 115, BPT]

E. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Generator #1	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)
Generator #3	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)
Generator #6	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)

F. 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)
Generator #1	0.48	0.48	0.48	0.01	17.64	3.80	1.44
Generator #2	0.32	0.32	0.32	0.004	11.72	2.53	0.96
Generator #3	0.57	0.57	0.57	0.01	15.08	4.01	0.42
Generator #4	0.22	0.22	0.22	0.003	7.94	1.71	0.65
Generator #5	0.17	0.17	0.17	0.002	6.22	1.34	0.51
Generator #6	0.57	0.57	0.57	0.01	15.08	4.01	0.42

G. Visible Emissions

1. Generators #1 and #4

Visible emissions from Generator #1 and from Generator #4 shall each not exceed 20% opacity on a six-minute block average basis except for periods of startup, during which time NMMC 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. NMMC 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. Generators #2, #3, #5, and #6

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

H. Generators #2, #3, #5, and #6 shall meet the applicable requirements of 40 C.F.R. Part 60, Subpart III, including the following: [incorporated under 06-096 C.M.R. ch. 115, BPT and 169 for Generator #6]

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. NMMC 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. NMMC may only change those

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

NMMC 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) 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, NMMC may be required to submit additional information. Upon written request from the Department, NMMC 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 7<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: July 19, 2024

Date of application acceptance: July 24, 2024

Date filed with the Board of Environmental Protection:

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

<b>FILED</b>
OCT 07, 2024
State of Maine
Board of Environmental Protection