



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

DEPARTMENT ORDER

RSU #3
Mount View Campus
Waldo County
Thorndike, Maine
A-1187-71-A-N

Departmental
Findings of Fact and Order
Air Emission License
After-the-Fact

FINDINGS OF FACT

After review of the air emission license 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

RSU #3 has applied for an Air Emission License for the operation of emission sources associated with the school system's Mount View Campus.

The equipment addressed in this license is located at 577 Mount View Road in Thorndike, Maine.

B. Title, Right, or Interest

In their application, RSU #3 submitted copies of a property deed demonstrating ownership of the facility. RSU #3 has provided sufficient evidence of title, right, or interest in the facility for purposes of this air emission license.

C. Emission Equipment

The following equipment is addressed in this air emission license:

Boilers

Equipment	Max. Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type	Date of Manuf.	Date of Install.	Stack #
Boiler #1	2.1	15.0 gal/hr	distillate fuel	2007	2007	1
Boiler #2	2.1	15.0 gal/hr	distillate fuel	2018	2018	1
Boiler #3	2.1	15.0 gal/hr	distillate fuel	2007	2007	1
Boiler #4	2.1	15.0 gal/hr	distillate fuel	2019	2019	1
Boiler #5	9.0	1 ton/hr	biomass	2007	2007	2

Stationary Engines

Equipment	Max. Input Capacity (MMBtu/hr)	Firing Rate (gal/hr)	Rated Output Capacity	Fuel Type	Date of Manuf.	Date of Install.
Generator #1	5.0	36.5	500 kW	distillate fuel	2008	2008
Fire Pump #1	1.6	11.4	145 bhp	distillate fuel	2008	2008

RSU #3 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, RSU #3 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.

RSU #3 operates a 30-gallon parts washer that uses a naphtha-based solvent.

D. Definitions

Biomass means any biomass-based solid fuel that is not a solid waste. This includes, but is not limited to, wood residue and wood products (e.g., trees, tree stumps, tree limbs, bark, and sawdust). This definition also includes wood chips and processed pellets made from wood or other forest residues. Inclusion in this definition does not constitute a determination that the material is not considered a solid waste. RSU #3 should consult with the Department before adding any new biomass type to its fuel mix.

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.

E. 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.

A new source is considered a major source based on whether or not total licensed annual emissions exceed the “Significant Emissions” levels as defined in the Department’s *Definitions Regulation*, 06-096 Code of Maine Rules (C.M.R.) ch. 100.

Pollutant	Total Licensed Annual Emissions (tpy)	Significant Emissions Levels
PM	11.6	100
PM ₁₀	11.6	100
PM _{2.5}	11.6	100
SO ₂	1.1	100
NO _x	15.2	100
CO	25.3	100
VOC	0.8	100

The Department has determined the facility is a minor source, and the application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 C.M.R. ch. 115.

F. Facility Classification

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

- As a synthetic minor source of air emissions for criteria pollutants, because RSU #3 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. Boilers #1 - #4

RSU #3 operates four distillate fuel-fired boilers for facility heating (Boilers #1 - #4). Each of these boilers has a maximum heat input rating of 2.1 MMBtu/hr. Boilers #1 and #3 were manufactured and installed in 2007. Boilers #2 and #4 were manufactured and installed in 2018 and 2019, respectively. All four of these boilers exhaust through a common stack (Stack #1) that is approximately 82 feet above ground level.

Boilers #1 - #4 are licensed to fire distillate fuel. With limited exceptions, no person shall import, distribute, or offer for sale any distillate fuel with a sulfur content greater than 0.0015% by weight (15 ppm) pursuant to 38 M.R.S. § 603-A(2)(A)(3). Therefore, the distillate fuel purchased or otherwise obtained for use in Boilers #1 - #4 shall not exceed 0.0015% by weight (15 ppm).

1. BACT Findings

RSU #3 submitted a BACT analysis for control of emissions from Boilers #1 - #4.

a. Particulate Matter (PM, PM₁₀, PM_{2.5})

RSU #3 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/PM₁₀/PM_{2.5} emissions from Boilers #1 - #4 is the use of distillate fuel and the emission limits listed in the tables below.

b. Sulfur Dioxide (SO₂)

RSU #3 has proposed to fire only distillate fuel with a sulfur content not to exceed 0.0015% by weight. The use of this fuel results in minimal emissions of SO₂, and additional add-on pollution controls are not economically feasible.

BACT for SO₂ emissions from Boilers #1 - #4 is the use of ultra-low-sulfur distillate fuel and the emission limits listed in the tables below.

c. Nitrogen Oxides (NO_x)

Several control strategies for the control of NO_x from Boilers #1 - #4 were considered including Selective Catalytic Reduction (SCR), Selective Non-Catalytic Reduction (SNCR), water/steam injection, and flue gas recirculation (FGR). However, none of these systems is considered feasible for these small distillate fuel-fired units.

BACT for NO_x emissions from Boilers #1 - #4 is the firing of only distillate fuel and the emission limits listed in the tables below.

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

Several control strategies for the control of CO and VOC were considered including oxidation catalysts and thermal oxidizers.

Oxidation catalysts and thermal oxidizers both have high capital, maintenance, and operational costs considering the size of the units in question. These controls were determined to not be economically feasible due to the cost of control equipment compared to the relatively small amount of pollutant controlled.

BACT for CO and VOC emissions from Boilers #1 - #4 is the firing of distillate fuel and the emission limits listed in the tables below.

e. Emission Limits

The BACT emission limits for Boilers #1 - #4 were based on the following:

PM/PM ₁₀ /PM _{2.5}	– 0.08 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
SO ₂	– based on firing distillate fuel with a maximum sulfur content of 0.0015% by weight
NO _x	– 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) and 4(D)

The BACT emission limits for Boilers #1 - #4 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)
Boiler #1	0.17	0.17	0.17	–	0.30	0.08	0.01
Boiler #2	0.17	0.17	0.17	–	0.30	0.08	0.01
Boiler #3	0.17	0.17	0.17	–	0.30	0.08	0.01
Boiler #4	0.17	0.17	0.17	–	0.30	0.08	0.01

2. Visible Emissions

Visible emissions from Stack #1 shall not exceed 20% 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 #1 - #4 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 #1 - #4 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. Boilers #1 and #3 are considered existing oil boilers rated less than 10 MMBtu/hr. Boilers #2 and #4 are considered new oil boilers rated less than 10 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. 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:

Boiler Category	Tune-Up Frequency
Oil fired boilers with a heat input capacity of ≤ 5 MMBtu/hr	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 oil fired boilers less than or equal to 5 MMBtu/hour. [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 oil fired boilers less than or equal to 5 MMBtu/hour. [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, RSU #3 shall prepare a compliance report by March 1st 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. "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. Boiler #5

RSU #3 operates Boiler #5 for facility heating. Boiler #5 is rated at 9.0 MMBtu/hr and fires biomass, primarily green wood chips with a moisture content of approximately 50% - 55% by weight. A heating value of 4,500 Btu/lb was assumed.

Boiler #5 was manufactured Hurst Boiler & Welding Co, Inc. and installed in 2007. It is equipped with a multiclone and exhausts through its own stack (Stack #2), which is approximately 82 feet above ground level. As described in the BACT analysis below,

1. BACT Findings

RSU #3 submitted a BACT analysis for control of emissions from Boiler #5.

a. Particulate Matter (PM, PM₁₀, PM_{2.5})

Particulate matter emissions from fuel combustion are formed from incomplete combustion of fuel and non-combustible material in the fuel. Potential particulate matter controls for biomass boilers consist of add-on controls, combustion of clean fuel, good combustion practices, or a combination of options. Potential add-on

controls for biomass boilers include fabric filters, electrostatic precipitators (ESPs), wet scrubbers, and multiclones.

Fabric filters, including baghouses, are not technically feasible due to the high risk of fires from smoldering particles carried over from the firebox. Additionally, the high moisture content of the exhaust gas can lead to “blinding” of the bags preventing them from working as intended.

A wet scrubber or wet ESP is not feasible based on significant environmental impacts due to water management, along with not being justifiable for economic and energy considerations.

Multiclones use centripetal force to separate particles from the gas stream. They consist of small diameter cyclones operating in parallel. Multiclones remove filterable particulate matter only and have no effect on condensable particulate matter. RSU #3 has proposed the use of a multiclone on Boiler #5 as BACT for control of particulate matter. The multiclone associated with Boiler #5 will be utilized during all unit operating times including startup and shutdown.

ESPs have a control efficiency of greater than 98% which is equivalent to or higher than the control efficiencies of the other technically feasible control options considered. However, boilers that fire wet biomass typically require pretreatment of the exhaust gases through the use of multiclones or similar control equipment to remove larger or smoldering particles which could damage the ESP. Therefore, an ESP is only considered technically feasible as additional control after the proposed multiclones.

ESPs have significant initial and ongoing costs. The cost of control for using an ESP for control after the multiclone is estimated to be significantly higher than \$10,000/ton for PM, PM₁₀, and PM_{2.5}. Therefore, use of an ESP is not considered financially feasible as BACT for control of particulate matter emissions from Boiler #5.

Therefore, the Department finds that BACT for emissions of PM, PM₁₀, and PM_{2.5} from Boiler #5 is the use of a multiclone during all operating times and the emission limits listed in the tables below.

b. Sulfur Dioxide (SO₂)

RSU #3 has proposed to fire only biomass in Boiler #5. The use of this fuel results in minimal emissions of SO₂, and additional add-on pollution controls are not economically feasible.

The Department finds that BACT for SO₂ emissions from Boiler #5 is the firing of only biomass fuel and the emission limits listed in the tables below.

c. Nitrogen Oxides (NO_x), Carbon Monoxide (CO), and Volatile Organic Compounds (VOC)

Emissions of NO_x, CO, and VOC from biomass-fired boilers of this size are typically controlled through proper operation and maintenance pursuant to the manufacturer's emission-related instructions. Additional controls for NO_x such as Selective Catalytic Reduction (SCR) and Selective Non-Catalytic Reduction (SNCR) were also considered. Add-on controls available for CO and VOC include oxidation catalysts and thermal oxidizers.

Both SCR and SNCR are technically feasible control technologies for minimizing NO_x. However, they have a negative environmental impact due to the potential for 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 this boiler.

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 not to be economically feasible.

The Department finds that BACT for NO_x, CO, and VOC emissions for Boiler #5 is proper operation and maintenance of the units and the emission limits listed in the table below.

d. Emission Limits

The BACT emission limits for Boiler #5 were based on the following:

PM/PM ₁₀ /PM _{2.5}	–	0.22 lb/MMBtu based on AP-42 Table 1.6-1 dated 4/2022
SO ₂	–	0.025 lb/MMBtu based on AP-42 Table 1.6-2 dated 4/2022
NO _x	–	0.22 lb/MMBtu based on AP-42 Table 1.6-2 dated 4/2022
CO	–	0.60 lb/MMBtu based on AP-42 Table 1.6-2 dated 4/2022
VOC	–	0.017 lb/MMBtu based on AP-42 Table 1.6-3 dated 4/2022
Visible Emissions	–	06-096 C.M.R. ch. 101, § 4(A)(5)(a)

The BACT emission limits for Boiler #5 are the following:

Unit	Pollutant	lb/MMBtu
Boiler #5	PM	0.22

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)
Boiler #5	1.98	1.98	1.98	0.23	1.98	5.40	0.15

2. Visible Emissions

Visible emissions from Boiler #5 shall not exceed 30% opacity on a six-minute block average basis, except for periods of startup, shutdown, or malfunction during which time RSU #3 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, RSU #3 shall keep records of the date, time, and duration of all startup, shutdown, and malfunction events and provide them to the Department upon request.

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

Due to its size, Boiler #5 is 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

Boiler #5 is 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 unit is considered an existing biomass boiler rated less than 10 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. 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:

Boiler Category	Tune-Up Frequency
Existing biomass-fired boilers that are not designated as "Boilers with Less Frequent Tune-up Requirements"	Every 2 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, not to exceed 36 months from the previous inspection. [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, not to exceed 36 months from the previous inspection. [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 two-year compliance period, RSU #3 shall prepare a compliance report by March 1st of the following year to document the information below for the two-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.

D. Generator #1 and Fire Pump #1

RSU #3 operates an emergency generator (Generator #1) and a fire pump powered by an emergency engine (Fire Pump #1). Generator #1 has an engine rated at 5.0 MMBtu/hr, and Fire Pump #1 has an engine rated at 1.6 MMBtu/hr. Both engines fire distillate fuel with a sulfur content of 0.0015% or less by weight. Generator #1 and Fire Pump #1 were both manufactured and installed in 2008.

1. BACT Findings

The BACT emission limits for Generator #1 are based on the following:

PM/PM ₁₀ /PM _{2.5}	– 0.12 lb/MMBtu from 06-096 C.M.R. ch. 103
SO ₂	– Combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO _x	– 3.2 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96
CO	– 0.85 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96
VOC	– 0.09 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96
Visible Emissions	– 06-096 C.M.R. ch. 101, § 4(A)(4)

The BACT emission limits for Fire Pump #1 are based on the following:

PM/PM ₁₀ /PM _{2.5}	– 0.31 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
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 10/96
CO – 0.95 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
VOC – 0.36 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
Visible Emissions – 06-096 C.M.R. ch. 101, § 4(A)(4)

The BACT emission limits for Generator #1 and Fire Pump #1 are the following:

Unit	Pollutant	lb/MMBtu
Generator #1	PM	0.12

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	0.60	0.60	0.60	0.01	16.00	4.25	0.45
Fire Pump #1	0.50	0.50	0.50	–	7.06	1.52	0.58

Visible emissions from Generator #1 and Fire Pump #1 each shall not exceed 20% opacity on a six-minute block average basis.

2. Chapter 169

Generator #1 was installed prior to the effective date of *Stationary Generators*, 06-096 C.M.R. ch. 169 and is therefore exempt from this rule pursuant to section 1. Fire Pump #1 is not a generator and is therefore also exempt from 06-096 C.M.R. ch. 169.

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 Generator #1 and Fire Pump #1 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)]

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. RSU #3 may only change those emission-related settings that are permitted by the manufacturer. [40 C.F.R. § 60.4211(a)]

RSU #3 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

RSU #3 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)]

E. Parts Washer

The parts washer has a design capacity of 30 gallons. The parts washer is subject to *Solvent Cleaners*, 06-096 C.M.R. ch. 130 and records shall be kept documenting compliance.

This equipment is exempt from *Industrial Cleaning Solvents*, 06-096 C.M.R. ch. 166 pursuant to Section (3)(B).

F. Fugitive Emissions

RSU #3 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.

RSU #3 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.

G. 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 Boilers #1 - #5 each for 8,760 hours/year; and
- Operating Generator #1 and Fire Pump #1 each for 100 hours/year of non-emergency operation.

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

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

	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	VOC
Boilers #1 - #4	2.9	2.9	2.9	0.1	5.3	1.3	0.1
Boiler #5	8.7	8.7	8.7	1.0	8.7	23.7	0.7
Generator #1	–	–	–	–	0.8	0.2	–
Fire Pump #1	–	–	–	–	0.4	0.1	–
Total TPY	11.6	11.6	11.6	1.1	15.2	25.3	0.8

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.

This determination is based on information provided by the applicant regarding the expected 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 RSU #3 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-1187-71-A-N 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] Payment of the annual air emission license fee for RSU #3 is due by the end of **February** of each year.
[38 M.R.S. § 353-A(3)]
- (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 #1 - #4**

A. Fuel

1. 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, BACT]
2. 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, fuel supplier certification, certificate of analysis, or testing of fuel in the tank on-site. [06-096 C.M.R. ch. 115, BACT]

B. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, 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)
Boiler #1	0.17	0.17	0.17	–	0.30	0.08	0.01
Boiler #2	0.17	0.17	0.17	–	0.30	0.08	0.01
Boiler #3	0.17	0.17	0.17	–	0.30	0.08	0.01
Boiler #4	0.17	0.17	0.17	–	0.30	0.08	0.01

- C. Visible emissions from Boilers #1 - #4 shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(2)]
- D. RSU #3 shall comply with all requirements of 40 C.F.R. Part 63, Subpart JJJJJ applicable to Boilers #1 - #4 including, but not limited to, the following: [incorporated under 06-096 C.M.R. ch. 115, 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:

Boiler Category	<u>Tune-Up Frequency</u>
Oil fired boilers with a heat input capacity of ≤ 5 MMBtu/hr	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 oil fired boilers less than or equal to 5 MMBtu/hour. [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 oil fired boilers less than or equal to 5 MMBtu/hour. [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, RSU #3 shall prepare a compliance report shall be prepared by March 1st 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) "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) **Boiler #5**

- A. RSU #3 shall only fire biomass, as defined by this license, in Boiler #5. [06-096 C.M.R. ch. 115, BACT]
- B. During all operating times, RSU #3 shall control particulate matter emissions from Boiler #5 by use of a multiclone. [06-096 C.M.R. ch. 115, BACT]
- C. RSU #3 shall keep records of any maintenance activities (planned or unplanned) performed on the multiclone. [06-096 C.M.R. ch. 115, BACT]
- D. At all times, PRL must operate and maintain Boiler #5 and the associated control equipment, including the multiclone, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Department which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [06-096 C.M.R. ch. 115, BACT]

E. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #5	PM	0.22	06-096 C.M.R. ch. 115, BACT

F. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, 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)
Boiler #5	1.98	1.98	1.98	0.23	1.98	5.40	0.15

G. Visible emissions from Boiler #5 shall not exceed 30% opacity on a six-minute block average basis, except for periods of startup, shutdown, or malfunction during which time RSU #3 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, RSU #3 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)]

H. RSU #3 shall comply with all requirements of 40 C.F.R. Part 63, Subpart JJJJJ applicable to Boiler #5 including, but not limited to, the following: [incorporated under 06-096 C.M.R. ch. 115, 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:

Boiler Category	Tune-Up Frequency
Existing biomass-fired boilers that are not designated as "Boilers with Less Frequent Tune-up Requirements"	Every 2 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, not to exceed 36 months from the previous inspection. [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, not to exceed 36 months from the previous inspection. [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 two-year compliance period, RSU #3 shall prepare a compliance report shall be prepared by March 1st of the following year to document the information below for the two-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:
 - (3) "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."
 - (4) "No secondary materials that are solid waste were combusted in any affected unit."
 - (5) "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 JJJJJJ 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.

(19) **Generator #1 and Fire Pump #1**

A. RSU #3 shall keep records of all maintenance conducted on the engines associated with Generator #1 and Fire Pump #1. [06-096 C.M.R. ch. 115, BACT]

B. 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)

C. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, 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	0.60	0.60	0.60	0.01	16.00	4.25	0.45
Fire Pump #1	0.50	0.50	0.50	—	7.06	1.52	0.58

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

E. Generator #1 and Fire Pump #1 each 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, 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. RSU #3 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. RSU #3 may only change those emission-related settings that are permitted by the manufacturer. [40 C.F.R. § 60.4211(a)]

RSU #3 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, BACT]

(20) **Parts Washer**

Parts washer at RSU #3 are subject to *Solvent Cleaners*, 06-096 C.M.R. ch. 130.

- A. RSU #3 shall keep records of the amount of solvent added to each parts washer. [06-096 C.M.R. ch. 115, BPT]
- B. The following are exempt from the requirements of 06-096 C.M.R. ch. 130 [06-096 C.M.R. ch. 130]:
 1. Solvent cleaners using less than two liters (68 oz.) of cleaning solvent with a vapor pressure of 1.00 mmHg, or less, at 20° C (68° F);
 2. Wipe cleaning; and,
 3. Cold cleaning machines using solvents containing less than or equal to 5% VOC by weight.

- C. The following standards apply to cold cleaning machines that are applicable sources under 06-096 C.M.R. ch. 130.
1. RSU #3 shall attach a permanent conspicuous label to each unit summarizing the following operational standards:
 - a. Waste solvent shall be collected and stored in closed containers.
 - b. Cleaned parts shall be drained of solvent directly back to the cold cleaning machine by tipping or rotating the part for at least 15 seconds or until dripping ceases, whichever is longer.
 - c. Flushing of parts shall be performed with a solid solvent spray that is a solid fluid stream (not a fine, atomized or shower type spray) at a pressure that does not exceed 10 psig. Flushing shall be performed only within the freeboard area of the cold cleaning machine.
 - d. The cold cleaning machine shall not be exposed to drafts greater than 40 meters per minute when the cover is open.
 - e. Sponges, fabric, wood, leather, paper products and other absorbent materials shall not be cleaned in the parts washer.
 - f. When a pump-agitated solvent bath is used, the agitator shall be operated to produce no observable splashing of the solvent against the tank walls or the parts being cleaned. Air agitated solvent baths may not be used.
 - g. Spills during solvent transfer shall be cleaned immediately. Sorbent material used to clean spills shall then be immediately stored in covered containers.
 - h. Work area fans shall not blow across the opening of the parts washer unit.
 - i. The solvent level shall not exceed the fill line.
 2. The remote reservoir cold cleaning machine shall be equipped with a perforated drain with a diameter of not more than six inches.
 3. The parts washer shall be equipped with a cover that shall be closed at all times except during cleaning of parts or the addition or removal of solvent.
- [06-096 C.M.R. ch. 130]

(21) Fugitive Emissions

- A. RSU #3 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. RSU #3 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)]

- (22) 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, RSU #3 may be required to submit additional information. Upon written request from the Department, RSU #3 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 3rd DAY OF MARCH, 2025.

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: 1/13/2025

Date of application acceptance: 1/24/2025

This Order prepared by Lynn Muzzey, Bureau of Air Quality.