



DEPARTMENT ORDER

Pleasant River Lumber Enfield, LLC
Penobscot County
Enfield, Maine
A-1163-71-A-N

Departmental
Findings of Fact and Order
Air Emission License

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

Pleasant River Lumber Enfield, LLC (PRL) has applied for an Air Emission License for the operation of emission sources associated with their lumber manufacturing facility.

The equipment addressed in this license is located at 542 Hammett Road in Enfield, Maine.

B. Title, Right, or Interest

In their application, PRL submitted a copy of a property deed demonstrating ownership of the facility. PRL 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 | 9.93 | 1.1 ton/hr | biomass | 2022 | 2022 | 1 |
| Boiler #2 | 9.93 | 1.1 ton/hr | biomass | 2022 | 2022 | 1 |
| Boiler #3 | 9.93 | 1.1 ton/hr | biomass | 2022 | 2022 | 1 |
| Boiler #4 | 6.31 | 69.0 gal/hr | propane | 2021 | 2022 | 2 |
| Kiln Heater #1 | 3.60 | 39.4 gal/hr | propane | 2021 | 2021 | N/A |

Stationary Engines

| Equipment | Max. Input Capacity (MMBtu/hr) | Rated Output Capacity | Fuel Type, % sulfur | Firing Rate (gal/hr) | Date of Manuf. | Date of Install. |
|------------------|---------------------------------------|------------------------------|----------------------------|-----------------------------|-----------------------|-------------------------|
| Fire Pump #1 | 1.5 | 160 Hp | distillate fuel, 0.0015% | 11.1 | 2004 | 2021 |
| Fire Pump #2 | 1.5 | 160 Hp | distillate fuel, 0.0015% | 11.1 | 2004 | 2021 |
| Generator #1 | 2.5 | 225 kW | distillate fuel, 0.0015% | 18.0 | 6/2005 | 2022 |

PRL may operate small stationary engines smaller than 0.5 MMBtu/hr. Such 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, PRL 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.

Process Equipment

| Equipment | Maximum Licensed Production Rate |
|------------------|---|
| Kilns #1 - #3 | 120 MMBF/year |

PRL may operate aqueous-based parts washers where the cleaning solution contains less than 5% VOC. Such units do not meet the definition of solvent cleaning machine, and there are no applicable requirements in *Solvent Cleaners*, 06-096 C.M.R. ch. 130. Therefore, aqueous-based parts washers are considered insignificant activities.

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, lumber, sawdust, sander dust, chips, scraps, slabs, millings, and shavings). 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. PRL 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.

Records or Logs mean either hardcopy or electronic records.

Particulate Matter (PM) means any airborne finely divided solid or liquid material with an aerodynamic diameter smaller than 100 micrometers as measured by applicable reference methods.

Particulate Matter (PM₁₀) means particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by applicable reference methods. PM₁₀ emissions include gaseous emissions from a source or activity which condense to form particulate matter at ambient temperatures (i.e., condensables).

Particulate Matter (PM_{2.5}) means particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers as measured by applicable reference methods. PM_{2.5} emissions include gaseous emissions from a source or activity which condense to form particulate matter at ambient temperatures (i.e., condensables).

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.

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 Emission” 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 Emission Levels |
|-------------------|---------------------------------------|-----------------------------|
| PM | 23.5 | 100 |
| PM ₁₀ | 23.3 | 100 |
| PM _{2.5} | 13.3 | 100 |
| SO ₂ | 3.3 | 100 |
| NO _x | 35.9 | 100 |
| CO | 82.2 | 100 |
| VOC | 79.7 | 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 annual throughput limit on the kilns the facility is licensed as follows:

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

Although emissions of CO are licensed above 80% of the major source threshold, this facility is not considered an “80% Synthetic Minor” source for the purpose of determining the minimum required compliance inspection frequency in accordance with Maine’s Compliance Monitoring Strategy, because no license restrictions are necessary to keep the facility’s emissions below the major source threshold for CO.

Similarly, although the kiln throughput limit is required to ensure the facility remains an area source of HAP, with this restriction potential emissions of each single HAP as well as total HAP are less than 80% of the major source thresholds.

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. Facility Description

PRL owns and operates an existing sawmill at 542 Hammett Road in West Enfield, Maine. The emission units currently installed at the facility are below the thresholds which require licensure under 06-096 C.M.R. ch. 115. The existing equipment includes a dehumidification kiln with a small propane-fired heater, two fire pumps, and a sawmill with material handling operations. PRL has proposed an expansion project which exceeds the licensing thresholds. The project includes installation of continuous kilns to dry spruce and fir lumber and three biomass-fired boilers and one propane boiler to provide heat to the kilns.

C. Boilers #1-3

PRL proposes to install three biomass-fired boilers (Boilers #1 - #3) to provide facility heat, to heat the kilns, and for in-house power generation. Steam from the boilers will be supplied to a micro-turbine which will generate electricity to offset utility-supplied power.

Boilers #1 - #3 are designed and manufactured by Hurst Boiler & Welding Company, Inc. and will each have a maximum heat input of 9.93 MMBtu/hr firing biomass. Each boiler will be equipped with an oxygen trim system which maintains an optimum air-to-fuel ratio. The biomass fuel will initially consist of mainly green wood from the lumber processing and sawing operations. PRL eventually plans to install a planer mill which will also supply dry fuel to the boilers.

As described in the BACT analysis below, Boilers #1 - #3 will each be equipped with a multiclone; from there, emissions from all three boilers will be combined and routed to a single electrostatic precipitator (ESP) and vented to a common stack (Stack #1) except for periods of boiler startup and ESP downtime. Stack #1 is 30 inches in diameter and exhausts 60 feet above ground level.

1. BACT Findings

Following is a BACT analysis for control of emissions from Boilers #1 - #3.

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. PRL has proposed the use of a multiclone on each boiler as BACT for control of particulate matter. The multiclones associated with Boilers #1 - #3 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 one common ESP for all three boilers is estimated to be approximately \$10,000/ton for PM and PM₁₀ and \$20,000/ton for PM_{2.5}. However, this configuration is not practical since a malfunction of the ESP would bring down all of the facility’s biomass boilers at once. Installation of separate ESPs on each individual boiler would result in a cost of control significantly higher than those listed above. Therefore, use of an ESP is not considered financially feasible as BACT for control of particulate matter emissions from Boilers #1 - #3.

Therefore, the Department finds that BACT for emissions of PM, PM₁₀, and PM_{2.5} from Boilers #1 - #3 is the use of a multiclone on each boiler during all operating times and the emission limits listed in the tables below. Compliance shall be demonstrated through stack testing upon request by the Department.

Additionally, PRL has requested additional enforceable conditions in order to avoid the cost and complexities involved in performing an ambient air quality impact analysis. PRL has proposed annual emission limits of 23.0 tpy for PM₁₀ and 13.0 tpy for PM_{2.5} for Boilers #1 - #3 combined.

Although use of an ESP, whether on each boiler or a single common ESP, is not considered economically feasible for BACT, PRL has elected to install and operate a single common ESP on the combined emissions from Boilers #1 - #3 as a strategy to reduce emissions below the thresholds where an ambient air quality impact analysis would be required. Therefore, at PRL's request the Department is imposing enforceable limits of 23.0 tpy for PM₁₀ and 13.0 tpy for PM_{2.5} for the combined emissions from Boilers #1 - #3. Each limit is on a 12-month rolling total basis. Compliance shall be demonstrated through compliance with short-term emission limits of 0.57 lb/hr for PM₁₀ and 0.52 lb/hr for PM_{2.5} and recordkeeping of the hours of each boiler's operating hours and whether or not the boiler was controlled by the ESP during those times.

PRL shall keep monthly records of the emissions of both PM₁₀ and PM_{2.5} from Boilers #1 - #3 using the following equation (Equation 1) or other method approved by the Department.

$$\text{Equation 1: } E_m = [(EL_{ESP} \times T_{ESP}) + (EL_{multi} \times T_{multi})]/2,000$$

Where:

- E_m = monthly emissions of pollutant in tons
- EL_{ESP} = licensed emission limit in lb/hr for emissions controlled by the ESP
- T_{ESP} = sum of the operating hours for all boilers (Boilers #1 - #3) combined when the ESP was operating
- EL_{multi} = licensed emission limit in lb/hr for emissions controlled by the multiclone
- T_{multi} = sum of the operating hours for all boilers (Boilers #1 - #3) combined when the ESP was not operating, i.e., operating hours when emissions are controlled by multiclones only

Compliance with the PM₁₀ and PM_{2.5} lb/hr emission limits for the boilers when using the ESP shall be demonstrated through performance testing of the combined emissions from Stack #1 conducted within one year of startup of the first boiler and upon Department request thereafter. Performance testing shall be conducted with

at least two boilers online. The test report shall include results for both emissions of filterable particulate and condensables. PRL may elect to either conduct testing in accordance with EPA Test Methods 201/201A and 202 or in accordance with EPA Test Method 5 (or other methods as approved by the Department). If PRL elects to demonstrate compliance using EPA Test Method 5, emissions of condensables and the particle size distribution shall be determined using the latest version of AP-42 Section 1.6.

PRL shall submit to the Department for approval a performance test protocol, as outlined in the Department's Performance Testing Guidance, at least 30 days prior to the scheduled date of the performance test. The Department's Performance Testing Guidance is available online at:

<https://www.maine.gov/dep/air/emissions/testing.html>

PRL shall operate the ESP to control emissions of particulate matter from Boilers #1 - #3 during all boiler operating times except for periods of startup, ESP malfunction, or periods when the ESP is down for required maintenance. PRL shall keep records of all boiler and ESP operating times. For any period when a boiler was operating and the ESP was not operated, PRL shall keep records including dates, times, and reason why the ESP was not operated.

PRL shall continuously monitor and record the ESP voltage and current during all operating times.

At all times, PRL must operate and maintain the boilers and the associated control equipment, including the multiclones and the ESP, 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.

Startups

The manufacturer recommends exhaust gases reach a temperature of at least 280 °F prior to sending it to the ESP to prevent condensation within the ESP that could cause corrosion, efficiency reduction, and equipment damage. Startup of a boiler is expected to last 4-5 hours per event, during which time the boiler will be exhausted to its own dedicated startup stack. Each startup stack is 18 inches in diameter and exhausts 50 feet above ground level.

PRL plans to operate Boilers #1 - #3 on a continuous basis, 24 hours per day and seven days per week, and take each out of service only for annual maintenance. As such, few startup periods are expected during the year. PRL shall keep records of

the number of startups and the number of hours each boiler spends in startup. For the purposes of this license, startup for Boilers #1 - #3 shall be defined as beginning when fire is first introduced into the boiler and ending when the boiler's flue gas is switched over to being exhausted through Stack #1. Boilers #1 - #3 shall not exceed 75 hours per year (calendar year basis) of startup for all three boilers combined.

BACT for particulate matter emissions during startup is determined to be a combined limit on startup hours of 75 hours per year (calendar year basis) for all three boilers combined. Compliance shall be demonstrated by recordkeeping of the date or each boiler startup, the start and end time of each boiler startup, and the total annual hours of startup time for all boilers combined.

b. Sulfur Dioxide (SO₂)

PRL has proposed to fire only biomass in Boilers #1 - #3. 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 Boilers #1 - #3 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 per 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. Emissions of NO_x, CO, and VOC can also be reduced by use of an oxygen trim system.

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 these boilers.

Oxidation catalysts and thermal oxidizers both have high capital, maintenance, and operational costs. Considering the size of the boilers in question, these controls were determined not to be economically feasible.

An oxygen trim system is designed to continuously measure and maintain an optimum air-to-fuel ratio in the boiler combustion zone. It measures the amount of oxygen in the exhaust gas stream and provides feedback to automatically position the air damper to maintain a set point for excess oxygen. Typically, boilers that operate with minimum excess oxygen are more efficient.

The Department finds that BACT for NO_x, CO, and VOC emissions for Boilers #1 - #3 is proper operation and maintenance of the units, continuous use of an automatic oxygen trim system, and the emission limits listed in the table below.

d. Emission Limits

The BACT emission limits for Boilers #1 - #3 were based on the following:

- PM – 0.22 lb/MMBtu based on AP-42 Table 1.6-1 dated 4/2022
- PM₁₀ – 0.217 lb/MMBtu (filterable plus condensable) based on AP-42 Table 1.6-1 dated 4/2022
- PM_{2.5} – 0.137 lb/MMBtu (filterable plus condensable) based on AP-42 Table 1.6-1 dated 4/2022
- SO₂ – 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. 115, BACT

The BACT emission limits for Boilers #1 - #3 are the following:

| Unit | Pollutant | lb/MMBtu |
|-----------|-----------|----------|
| Boiler #1 | PM | 0.22 |
| Boiler #2 | PM | 0.22 |
| Boiler #3 | 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 #1 | 2.18 | 2.15 | 1.36 | 0.25 | 2.18 | 5.96 | 0.17 |
| Boiler #2 | 2.18 | 2.15 | 1.36 | 0.25 | 2.18 | 5.96 | 0.17 |
| Boiler #3 | 2.18 | 2.15 | 1.36 | 0.25 | 2.18 | 5.96 | 0.17 |

Additionally, PRL has requested additional particulate matter emission limits to stay below the threshold at which an ambient air quality analysis would be required. These voluntary limits were based on the following:

- PM₁₀ – 0.057 lb/MMBtu (filterable plus condensable) based on AP-42 Table 1.6-1 dated 4/2022
- PM_{2.5} – 0.052 lb/MMBtu (filterable plus condensable) based on AP-42 Table 1.6-1 dated 4/2022

The emission limits for Boilers #1 - #3 to remain below modeling thresholds are the following:

| Unit | PM ₁₀ (lb/hr) | PM _{2.5} (lb/hr) |
|-----------|-----------------------------|------------------------------|
| Boiler #1 | 0.57 | 0.52 |
| Boiler #2 | 0.57 | 0.52 |
| Boiler #3 | 0.57 | 0.52 |

| Unit | PM ₁₀ (tpy) | PM _{2.5} (tpy) |
|--|---------------------------|----------------------------|
| Boiler #1 - #3 (all boilers combined) | 23.0 | 13.0 |

2. Visible Emissions

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

Visible emissions from each boiler's startup stack shall not exceed 20% opacity on a six-minute block average basis, except for periods of startup, shutdown, or malfunction during which time PRL may comply with the following work practice standards in lieu of the numerical visible emissions standard.

- a. Maintain a log (written or electronic) of the date, time, and duration of all operating time, startups, shutdowns, and malfunctions for each boiler.
- b. Develop and implement a written startup and shutdown plan for each boiler.
- c. The duration of unit startups shall each not exceed five hours per occurrence. The duration of shutdowns or malfunctions shall each not exceed one hour per occurrence.

Note: The above statement does not restrict boiler startups to five hours. It restricts the amount of time a boiler startup stack is exempt from the numerical visible emissions standard. A startup may extend beyond five hours in length; however, the startup stack becomes subject to the 20% opacity standard after that period of time.

- d. Operate each boiler at all times in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department that 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 unit.

3. Daily Ash Removal

On a daily basis the boiler operators will rake the ash out of the boiler. This process is expected to take approximately 10 minutes and could potentially involve removing the fire from the boiler.

As described in the BACT section above, startup for Boilers #1 - #3 is defined as beginning when fire is first introduced into the boiler and ending when the boiler's flue gas is switched over to being exhausted through Stack #1. The daily ash removal from the boiler is not considered a "startup" even if the fire is raked out of the boiler because the boiler does not cool down significantly during the process and the emissions from the boiler will continue to vent to Stack #1 via the ESP throughout the process.

4. Emissions Inventory Throughput

Pursuant to 06-096 C.M.R. ch. 137, PRL shall keep records of the monthly and annual hours of operation (on a calendar year basis) of each boiler (Boilers #1 - #3). Unless another method is approved by the Department, PRL shall calculate and report annual throughput (fuel use) for each boiler based on hours of operation and the boiler's maximum fuel consumption (1.10 ton of biomass per hour).

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

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

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

Boilers #1 - #3 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. These units are considered new boilers rated less than 10 MMBtu/hr. [40 C.F.R. §§63.11193 and 63.11195]

A summary of the currently applicable federal 40 C.F.R. Part 63, Subpart JJJJJ requirements is listed below. Notification forms and 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) Boilers #1 - #3 become subject to 40 C.F.R. Part 63, Subpart JJJJJJ upon startup. [40 C.F.R. § 63.1196(c)]
- (2) An Initial Notification submittal to EPA is due within 120 days after the source becomes subject to the standard. [40 C.F.R. § 63.11225(a)(2)]
- (3) PRL is not required to submit a Notification of Compliance Status for Boilers #1 - #3. [40 C.F.R. § 11225(a)(4)]
- (4) Boiler Tune-Up Program
 - (i) A boiler tune-up program shall be implemented. [40 C.F.R. § 63.11223]
 - (ii) 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 |
|---|--------------------------|
| Boiler with oxygen trim system which maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune up | Every 5 years |

[40 C.F.R. § 63.11223(a) and Table 2]

- (iii) PRL is not required to complete a performance tune-up upon initial startup of Boilers #1 - #3. The first tune-up is due no later than 61 months after initial startup. [40 C.F.R. § 63.11210(g)]
- (iv) 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 boilers with oxygen trim systems. [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 boilers with oxygen trim systems. [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)]
- (v) 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; and
 2. A description of any corrective actions taken as part of the tune-up of the boiler.

(5) Compliance Report

A compliance report shall be prepared by March 1st every five years which covers the previous five calendar years. 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

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.

Records shall be in a form suitable and readily available for expeditious review.

D. Boiler # 4 and Kiln Heater #1

PRL proposes to install two propane-fired units. Boiler #4 is rated at 6.31 MMBtu/hr and will be used as a back-up unit to provide additional building heat and/or heat for the kilns as needed. Kiln Heater #1 is rated at 3.60 MMBtu/hr and works in conjunction with a dehumidification kiln (Kiln #3).

1. BACT Findings

Following is a BACT analysis for control of emissions from Boiler #4 and Kiln Heater #1.

a. Particulate Matter (PM, PM₁₀)

PRL has proposed to burn only low-ash content fuels (propane) in Boiler #4 and Kiln Heater #1. Additional add-on pollution controls are not economically feasible due to the cost of control equipment compared to the relatively small amount of pollutant controlled.

BACT for PM/PM₁₀ emissions from Boiler #4 and Kiln Heater #1 is the firing of propane and the emission limits listed in the tables below.

b. Sulfur Dioxide (SO₂)

PRL has proposed to fire only propane in Boiler #4 and Kiln Heater #1. The use of this fuel results in minimal emissions of SO₂, and additional add-on pollution

controls are not economically feasible due to the cost of control equipment compared to the relatively small amount of pollutant controlled.

BACT for SO₂ emissions from Boiler #4 and Kiln Heater #1 is the use of propane and the emission limits listed in the tables below.

c. Nitrogen Oxides (NO_x)

Several control strategies for the control of NO_x from Boiler #4 and Kiln Heater #1 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 the location and application of these small propane-fired units.

BACT for NO_x emissions from Boiler #4 and Kiln Heater #1 is the firing of only propane 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 Boiler #4 and Kiln Heater #1 is the firing of propane and the emission limits listed in the tables below.

e. Emission Limits

The BACT emission limits for Boiler #4 and Kiln Heater #1 were based on the following:

| | | |
|---------------------|---|--|
| PM/PM ₁₀ | – | 0.7 lb/1,000 gallons based on AP-42 Table 1.5-1 dated 7/08 |
| SO ₂ | – | 0.054 lb/1,000 gallons based on AP-42 Table 1.5-1 dated 7/08 |
| NO _x | – | 13 lb/1,000 gallons based on AP-42 Table 1.5-1 dated 7/08 |
| CO | – | 7.5 lb/1,000 gallons based on AP-42 Table 1.5-1 dated 7/08 |
| VOC | – | 1 lb/1,000 gallons based on AP-42 Table 1.5-1 dated 7/08 |
| Visible Emissions | – | 06-096 C.M.R. chs. 101 and 115, BACT |

The BACT emission limits for Boiler #4 and Kiln Heater #1 are the following:

| Unit | Pollutant | lb/MMBtu |
|----------------|-----------|----------|
| Boiler #4 | PM | 0.01 |
| Kiln Heater #1 | PM | 0.01 |

| 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 #4 | 0.01 | 0.05 | 0.05 | – | 0.90 | 0.52 | 0.07 |
| Kiln Heater #1 | 0.01 | 0.03 | 0.03 | – | 0.51 | 0.30 | 0.04 |

2. Visible Emissions

Visible emissions from Boiler #4 and Kiln Heater #1 shall each not exceed 10% opacity on a six-minute block average basis.

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

Due to their size Boiler #4 and Kiln Heater #1 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

Boiler #4 and Kiln Heater #1 are not subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63, Subpart JJJJJ. Gas-fired units are exempt from the requirements of this regulation. [40 C.F.R. §§ 63.11195(e)]

E. Fire Pumps #1 and #2 and Generator #1

PRL operates two emergency fire pumps (Fire Pumps #1 and #2). The fire pump engines are each rated at 1.5 MMBtu/hr and fire distillate fuel. Fire Pumps #1 and #2 were manufactured in 2004.

PRL proposes to install an emergency generator (Generator #1). It is a generator set consisting of an engine and an electrical generator. Generator #1 has an engine rated at 2.5 MMBtu/hr which fires distillate fuel and was manufactured in June 2005.

1. BACT Findings

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

- PM/PM₁₀ - 0.31 lb/MMBtu based on AP-42 Table 3.3-1 dated 10/96
- SO₂ - 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 based on AP-42 Table 3.3-1 dated 10/96
- CO - 0.95 lb/MMBtu based on AP-42 Table 3.3-1 dated 10/96
- VOC - 0.36 lb/MMBtu based on AP-42 Table 3.3-1 dated 10/96
- Visible Emissions - 06-096 C.M.R. ch. 101

The BACT emission limits for the fire pumps and Generator #1 are the following:

| Unit | PM (lb/hr) | PM ₁₀ (lb/hr) | PM _{2.5} (lb/hr) | SO ₂ (lb/hr) | NO _x (lb/hr) | CO (lb/hr) | VOC (lb/hr) |
|--------------|------------|--------------------------|---------------------------|-------------------------|-------------------------|------------|-------------|
| Fire Pump #1 | 0.47 | 0.47 | 0.47 | – | 6.70 | 1.44 | 0.55 |
| Fire Pump #2 | 0.47 | 0.47 | 0.47 | – | 6.70 | 1.44 | 0.55 |
| Generator #1 | 0.77 | 0.77 | 0.77 | – | 10.89 | 2.35 | 0.89 |

Visible emissions from Fire Pumps #1 and #2 and Generator #1 shall each not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time PRL may comply with the following work practice standards in lieu of the numerical visible emissions standard.

- a. Maintain a log (written or electronic) of the date, time, and duration of all fire pump and generator startups.
- b. Operate the fire pumps and generator in accordance with the manufacturer’s emission-related operating instructions.
- c. Minimize the engine’s time spent at idle during startup and minimize the engine’s startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations shall apply.
- d. Operate the fire pumps and generator, including any associated air pollution control equipment, at all times in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department that 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 unit.

2. New Source Performance Standards (NSPS)

Due to the dates of manufacture of Fire Pumps #1 and #2 and Generator #1, the 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 since the units were manufactured prior to April 1, 2006. [40 C.F.R. § 60.4200]

3. 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 applicable to the emergency generator and fire pump engines listed above. The units are considered existing, emergency stationary reciprocating internal combustion engines at an area HAP source and are not subject to New Source Performance Standards regulations. EPA's August 9, 2010 memo (*Guidance Regarding Definition of Residential, Commercial, and Institutional Emergency Stationary RICE in the NESHAP for Stationary RICE*) specifically does not exempt these units from the federal requirements. [40 C.F.R. § 63.6585]

A summary of the currently applicable federal 40 C.F.R. Part 63, Subpart ZZZZ requirements is listed below.

a. Emergency Engine Designation and Operating Criteria

Under 40 C.F.R. Part 63, Subpart ZZZZ, a stationary reciprocating internal combustion engine (RICE) is considered an **emergency** stationary RICE (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 63, Subpart ZZZZ, 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 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 RICE 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.

Fire Pumps #1 and #2 and Generator #1 shall be limited to the usage outlined in 40 C.F.R. § 63.6640(f) and therefore may be classified as existing emergency stationary RICE as defined in 40 C.F.R. Part 63, Subpart ZZZZ. Failure to comply

with all of the requirements listed in 40 C.F.R. § 63.6640(f) may cause these engines to not be considered emergency engines and therefore subject to all applicable requirements for non-emergency engines.

b. 40 C.F.R. Part 63, Subpart ZZZZ Requirements

(1) Operation and Maintenance Requirements
[40 C.F.R. § 63.6603(a) and Table 2(d)]

| | Operating Limitations |
|--|---|
| Compression ignition (distillate fuel) units: <i>Fire Pump #1 and #2 Generator #1</i> | <ul style="list-style-type: none">- Change oil and filter every 500 hours of operation or annually, whichever comes first;- Inspect the air cleaner every 1000 hours of operation or annually, whichever comes first, and replace as necessary; and- Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. |

The engines shall be operated and maintained according to the manufacturer's emission-related written instructions, or PRL shall develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engines in a manner consistent with good air pollution control practice for minimizing emissions. [40 C.F.R. § 63.6625(e)]

(2) Optional Oil Analysis Program

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

(3) Non-Resettable Hour Meter Requirement

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

(4) Startup Idle and Startup Time Minimization Requirements

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

(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. § 63.6640(f)]

(6) Recordkeeping

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

F. Kilns

PRL proposes to install three kilns for the drying of spruce and fir lumber. Kilns #1 and #2 manufactured by Valutec Wood Dryers, Inc. will operate continuously with cross circulation using multiple drying zones to increase drying efficiency and product consistency. Kilns #1 and #2 are designed to each have a maximum production rate of 55 million board feet per year (MMBF/year). Kiln #3 is designed and manufactured by Nyle Dry Kilns and is a smaller dehumidification kiln with a design capacity of 10 MMBF/year. Kiln #3 is a batch kiln which typically operates on a four-day cycle. Kiln #3 uses Kiln Heater #1 and operates on a similar heat transfer principle as a heat pump.

PRL has proposed a throughput limit of 120 MMBF/year for Kilns #1 - #3 combined (on a 12-month rolling total basis). An emission factor of 1.283 lb of VOC per thousand board feet (lb/MBF) was used based on a Forest Products Journal article *Estimated VOC Losses during the Drying of Five Northeastern Species* dated 1999. Based on the proposed throughput limit and the listed emission factor, the kilns will be limited to potential emissions of 77.0 tpy of VOC.

Potential emissions of total HAP are estimated to be 13.6 tpy based on averaging the emission factors for white and black spruce contained in the *Handbook of Substance-Specific Information for National Pollutant Release Inventory Reporting*, also known as the NPRI Handbook published by the National Council for Air and Stream Improvement (NCASI). This total is predominantly comprised of acetaldehyde (5.2 tpy) and methanol (7.7 tpy). When reporting actual HAP emissions pursuant to 06-096 C.M.R. ch. 137, PRL shall use the following emission factors (or other methods approved by the Department).

| Pollutant | lb/MBF |
|------------------------|-----------------------|
| Acetaldehyde | 8.65×10^{-2} |
| Acrolein | 1.15×10^{-3} |
| Benzene | 1.55×10^{-5} |
| Formaldehyde | 8.00×10^{-3} |
| Methanol | 0.129 |
| Methyl Isobutyl Ketone | 2.55×10^{-3} |
| Toluene | 2.50×10^{-4} |

G. General Process and Fugitive Emissions

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity on a five-minute block average basis.

Visible emissions from any general process source (including material handling cyclones) shall not exceed 20% opacity on a six-minute block average basis.

PRL shall not cause visible emissions (not including water vapor), measured as any level of opacity, totaling twelve minutes or more in any one-hour period at ground level over any land or surrounding any buildings not owned by PRL. Opacity under this condition shall be determined pursuant to EPA Method 22, *Visible Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares*, 40 C.F.R. Part 60, Appendix A.

PRL shall keep records of any maintenance activities (planned or unplanned) performed on any material handling cyclone.

H. VOC RACT

Reasonably Available Control Technology for Facilities that Emit Volatile Organic Compounds, 06-096 C.M.R. ch. 134 (VOC RACT) is applicable to sources that have the potential to emit quantities of VOC equal to or greater than 40 tons/year from non-exempt equipment. Indirect contact wood kilns are exempt from VOC RACT pursuant to 06-096 C.M.R. ch. 134, § 1(C)(6).

I. Emission Statements

PRL is subject to emissions inventory requirements contained in *Emission Statements*, 06-096 C.M.R. ch. 137. PRL shall maintain the following records in order to comply with this rule:

1. Hours of operation of Boilers #1 - #3 to calculate throughput as described in Section II(C)(4) of this license and to calculate annual emissions of pollutants;
2. Monthly calculated emissions of PM₁₀ and PM_{2.5} as described by this license;
3. The amount of propane fired in Boiler #4 and Kiln Heater #1 (each) on an annual basis;
4. The amount of distillate fuel fired in Fire Pumps #1 and #2 (each) on an annual basis;
5. The sulfur content of the distillate fuel fired in Fire Pumps #1 and #2;
6. Kiln throughput on a monthly basis; and
7. Hours each emission unit was active or operating on a monthly basis.

Beginning with reporting year 2023 and every third year thereafter, PRL shall report to the Department emissions of hazardous air pollutants as required by 06-096 C.M.R. ch. 137, § (3)(C). The Department will use these reports to calculate and invoice for the applicable annual air quality surcharge for the subsequent three billing periods. PRL shall pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3). [38 M.R.S. § 353-A(1-A)]

J. 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:

- Emissions of PM from Boilers #1 - # are based on the maximum operation of the boilers that can occur without the ESP while maintaining emissions of PM₁₀ below 23.0 tpy. This is equivalent to 7,150 hours of operation at the licensed emission limit.
- Emission limits for Boilers #1 - #3 (combined) of 23.0 tpy for PM₁₀ and 13.0 tpy for PM_{2.5};
- Operating Boilers #1 - #3 for 8,760 hours/year each for emissions of SO₂, NO_x, CO, and VOC;
- Operating Boiler #4 and Kiln Heater #1 for 8,760 hours/year each;
- Operating Fire Pumps #1 and #2 and Generator #1 for 100 hours/year each; and
- Drying 120 MMBF/year in Kilns #1 - #3.

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 - #3 | 23.4 | 23.0 | 13.0 | 3.3 | 28.7 | 78.3 | 2.2 |
| Boiler #4 | 0.1 | 0.2 | 0.2 | – | 3.9 | 2.3 | 0.3 |
| Kiln Heater #1 | – | 0.1 | 0.1 | – | 2.2 | 1.3 | 0.2 |
| Fire Pump #1 | – | – | – | – | 0.3 | 0.1 | – |
| Fire Pump #2 | – | – | – | – | 0.3 | 0.1 | – |
| Generator #1 | – | – | – | – | 0.5 | 0.1 | – |
| Kilns #1 - #3 | – | – | – | – | – | – | 77.0 |
| Total TPY | 23.5 | 23.3 | 13.3 | 3.3 | 35.9 | 82.2 | 79.7 |

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

III. AMBIENT AIR QUALITY ANALYSIS

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

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

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

This determination is based on information provided by the applicant regarding the expected construction and operation of the proposed emission units. If the Department determines that any parameter (e.g., stack size, configuration, flow rate, emission rates, nearby structures, etc.)

deviates from what was included in the application, the Department may require PRL 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-1163-71-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 commencing 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 #1 - #3**
- A. PRL is authorized to install and operate Boilers #1 - #3. PRL shall submit to the Department notification of the date of initial startup of each boiler within 30 days of each occurrence. [06-096 C.M.R. ch. 115, BACT]
- B. Boilers #1 - #3 shall fire only biomass. [06-096 C.M.R. ch. 115, BACT]
- C. Boilers #1 - #3 shall each be equipped with an oxygen trim system which automatically maintains an optimum air-to-fuel ratio. The oxygen trim system shall be operated at all times the boiler is in operation except for startup and shutdown. [06-096 C.M.R. ch. 115, BACT]
- D. PRL shall limit hours of startup operation for Boilers #1 - #3 to no more than a total of 75 hours per year for all three boilers combined (calendar year basis). Compliance shall be demonstrated by recordkeeping of the date of each boiler startup, the start and end time of each boiler startup, and the total annual hours of startup time for all boilers combined. [06-096 C.M.R. ch. 115, BACT]
- Note: Startup for Boilers #1 - #3 is defined as beginning when fire is first introduced into the boiler and ending when the boiler's flue gas is switched over to being exhausted through Stack #1.
- E. During periods of startup and of ESP downtime, Boilers #1 - #3 may exhaust to each boiler's dedicated startup stack in lieu of Stack #1. Each startup stack shall be a minimum of 50 feet above ground level and no more than 18 inches in diameter at the exhaust point. [06-096 C.M.R. ch. 115, BACT]
- F. Boilers #1 - #3 shall each exhaust to Stack #1 during all operating times except for periods of startup and ESP downtime. Daily ash cleanings are not considered periods of startup and the boiler shall exhaust to Stack #1 throughout the ash cleanout process. [06-096 C.M.R. ch. 115, BACT]

- G. Stack #1 shall be a minimum of 60 feet above ground level and no more than 30 inches in diameter at the exhaust point. [06-096 C.M.R. ch. 115, BACT]
- H. During all operating times, PRL shall control particulate matter emissions from each boiler (Boilers #1 - #3) by use of a multiclone specific to the boiler. [06-096 C.M.R. ch. 115, BACT]
- I. PRL shall keep records of any maintenance activities (planned or unplanned) performed on each multiclone. [06-096 C.M.R. ch. 115, BACT]
- J. At all times, PRL must operate and maintain the boilers and the associated control equipment, including the multiclones and the ESP, 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]
- K. Emissions shall not exceed the following:

| Emission Unit | Pollutant | lb/MMBtu | Origin and Authority |
|---------------|-----------|----------|-----------------------------|
| Boiler #1 | PM | 0.22 | 06-096 C.M.R. ch. 115, BACT |
| Boiler #2 | PM | 0.22 | 06-096 C.M.R. ch. 115, BACT |
| Boiler #3 | PM | 0.22 | 06-096 C.M.R. ch. 115, BACT |

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

| Emission 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 | 2.18 | 2.15 | 1.36 | 0.25 | 2.18 | 5.96 | 0.17 |
| Boiler #2 | 2.18 | 2.15 | 1.36 | 0.25 | 2.18 | 5.96 | 0.17 |
| Boiler #3 | 2.18 | 2.15 | 1.36 | 0.25 | 2.18 | 5.96 | 0.17 |

- M. Annual Particulate Matter Emission Limits [06-096 C.M.R. ch. 115, § 7(C)(1)]

1. PRL shall not exceed an annual emission limit for PM₁₀ of 23.0 tpy on a 12-month rolling total basis from the combined emissions from Boilers #1 - #3.
2. PRL shall not exceed an annual emission limit for PM_{2.5} of 13.0 tpy on a 12-month rolling total basis from the combined emissions from Boilers #1 - #3.

3. PRL shall operate the ESP to control emissions of particulate matter from Boilers #1 - #3 during all boiler operating times except for periods of startup, ESP malfunction, or periods when the ESP is down for required maintenance.
4. Emissions of PM₁₀ and PM_{2.5} shall not exceed the following when controlled by the ESP:

| Emission Unit | PM ₁₀ (lb/hr) | PM _{2.5} (lb/hr) |
|---------------|-----------------------------|------------------------------|
| Boiler #1 | 0.57 | 0.52 |
| Boiler #2 | 0.57 | 0.52 |
| Boiler #3 | 0.57 | 0.52 |

5. PRL shall keep records of all boiler and ESP operating times. For any period when a boiler was operating and exhausting to Stack #1 and the ESP was not operated, PRL shall keep records including dates, times, and reason why the ESP was not operated.
6. PRL shall continuously monitor and record the ESP voltage and current during all operating times.
7. PRL shall calculate and keep records of monthly and 12-month rolling total emissions of PM₁₀ and PM_{2.5} emissions from Boiler #1 - #3. Monthly emissions of PM₁₀ and PM_{2.5} shall be calculated using the following equation (Equation 1) or other method approved by the Department.

$$\text{Equation 1: } E_m = [(EL_{ESP} \times T_{ESP}) + (EL_{multi} \times T_{multi})]/2,000$$

Where:

- E_m = monthly emissions of pollutant in tons
- EL_{ESP} = licensed emission limit in lb/hr for emissions controlled by the ESP
- T_{ESP} = sum of the operating hours for all boilers (Boilers #1 - #3) combined when the ESP was operating
- EL_{multi} = licensed emission limit in lb/hr for emissions controlled by the multiclone
- T_{multi} = sum of the operating hours for all boilers (Boilers #1 - #3) combined when the ESP was not operating, i.e., operating hours when emissions are controlled by multiclones only

8. Compliance with the PM₁₀ and PM_{2.5} lb/hr emission limits when operating the ESP shall be demonstrated through performance testing of the combined emissions from

Stack #1 conducted within one year of startup of the first boiler and upon Department request thereafter.

9. PRL shall submit to the Department for approval a performance test protocol, as outlined in the Department's Performance Testing Guidance, at least 30 days prior to the scheduled date of the performance test.
 10. Performance testing shall be conducted with at least two boilers online.
 11. PRL may elect to conduct PM₁₀ and PM_{2.5} testing either in accordance with EPA Test Methods 201/201A and 202 or in accordance with EPA Test Method 5 (or other methods as approved by the Department). If PRL elects to demonstrate compliance using EPA Test Method 5, emissions of condensables and the particle size distribution shall be determined using the latest version of AP-42 Section 1.6 or other methods approved by the Department.
 12. The test report shall include results for both emissions of filterable particulate and condensables as applicable for the given pollutant.
- N. Visible Emissions [06-096 C.M.R. ch. 115, BACT]

1. Visible emissions from Stack #1 shall not exceed 10% opacity on a six-minute block average basis.
2. Visible emissions from each boiler's startup stack shall not exceed 20% opacity on a six-minute block average basis, except for periods of startup, shutdown, or malfunction during which time PRL may comply with the following work practice standards in lieu of the numerical visible emissions standard. During periods of startup, shutdown, or malfunction PRL may comply with the following work practice standards in lieu of the applicable numerical visible emissions standard for a given stack.
 - a. Maintain a log (written or electronic) of the date, time, and duration of all operating time, startups, shutdowns, and malfunctions for each boiler.
 - b. Develop and implement a written startup and shutdown plan for each boiler.
 - c. The duration of unit startups shall each not exceed five hours per occurrence. The duration of shutdowns or malfunctions shall each not exceed one hour per occurrence.

Note: The above statement does not restrict boiler startups to five hours. It restricts the amount of time a boiler startup stack is exempt from the numerical visible emissions standard. A startup may extend beyond five hours in length;

however, the startup stack becomes subject to the 20% opacity standard after that period of time.

- d. Operate each boiler at all times in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department that 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 unit.
- O. PRL shall comply with all requirements of 40 C.F.R. Part 63, Subpart JJJJJJ applicable to Boilers #1 - #3 including, but not limited to, the following:
[incorporated under 06-096 C.M.R. ch. 115, BACT]
 - 1. An Initial Notification submittal to EPA is due within 120 days after the source becomes subject to the standard. [40 C.F.R. § 63.11225(a)(2)]
 - 2. 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 |
|---|--------------------------|
| Boiler with oxygen trim system which maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune up | Every 5 years |

[40 C.F.R. § 63.11223(a) and Table 2]

- b. The first tune-up for each boiler is due no later than 61 months after initial startup. [40 C.F.R. § 63.11210(g)]
- c. 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 boilers with oxygen trim systems.
[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 boilers with oxygen trim systems.

[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)]

d. 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)]

3. Compliance Report

A compliance report shall be prepared by March 1st every five years which covers the previous five calendar years. 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.”
- 4. 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)]:
 - a. Copies of notifications and reports with supporting compliance documentation;
 - b. 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;
 - c. Records of the occurrence and duration of each malfunction of each applicable boiler; and
 - d. Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler.

Records shall be in a form suitable and readily available for expeditious review.

(18) **Boiler #4 and Kiln Heater #1**

A. Boiler #4 and Kiln Heater #1 shall fire only propane. [06-096 C.M.R. ch. 115, BACT]

B. Emissions shall not exceed the following:

| Emission Unit | Pollutant | lb/MMBtu | Origin and Authority |
|----------------|-----------|----------|-----------------------------|
| Boiler #4 | PM | 0.01 | 06-096 C.M.R. ch. 115, BACT |
| Kiln Heater #1 | PM | 0.01 | 06-096 C.M.R. ch. 115, BACT |

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) |
|----------------|------------|--------------------------|---------------------------|-------------------------|-------------------------|------------|-------------|
| Boiler #4 | 0.01 | 0.05 | 0.05 | – | 0.90 | 0.52 | 0.07 |
| Kiln Heater #1 | 0.01 | 0.03 | 0.03 | – | 0.51 | 0.30 | 0.04 |

D. Visible emissions from Boiler #4 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 3(A)(3)]

E. Visible emissions from Kiln Heater #1 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

(19) Fire Pumps #1 and #2 and Generator #1

A. Each of the fire pumps and Generator #1 shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 C.M.R. ch. 115, BACT]

B. The fuel sulfur content for Fire Pumps #1 and #2 and Generator #1 shall be limited to 0.0015% sulfur by weight. Compliance shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of the tank containing the fuel to be fired. [06-096 C.M.R. ch. 115, BACT]

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) |
|--------------|------------|--------------------------|---------------------------|-------------------------|-------------------------|------------|-------------|
| Fire Pump #1 | 0.47 | 0.47 | 0.47 | – | 6.70 | 1.44 | 0.55 |
| Fire Pump #2 | 0.47 | 0.47 | 0.47 | – | 6.70 | 1.44 | 0.55 |
| Generator #1 | 0.77 | 0.77 | 0.77 | – | 10.89 | 2.35 | 0.89 |

D. Visible Emissions

Visible emissions from Fire Pumps #1 and #2 and Generator #1 shall each not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time PRL may comply with the following work practice standards in lieu of the numerical visible emissions standard. [06-096 C.M.R. ch. 101, § 3(A)(4)]

1. Maintain a log (written or electronic) of the date, time, and duration of all fire pump and generator startups.
2. Operate the fire pumps and generator in accordance with the manufacturer's emission-related operating instructions.
3. Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations shall apply.
4. Operate the fire pumps and generator, including any associated air pollution control equipment, at all times in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such

operation and maintenance procedures are being used will be based on information available to the Department that 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 unit.

E. Fire Pumps #1 and #2 and Generator #1 shall meet the applicable requirements of 40 C.F.R. Part 63, Subpart ZZZZ, including the following:
[incorporated under 06-096 C.M.R. ch. 115, BACT]

1. PRL shall meet the following operational limitations for each of the compression ignition emergency engines:
 - a. Change the oil and filter every 500 hours of operation or annually, whichever comes first;
 - b. Inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
 - c. Inspect the hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

Records shall be maintained documenting compliance with the operational limitations.

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

2. Oil Analysis Program Option
PRL has the option of utilizing an oil analysis program which complies with the requirements of § 63.6625(i) in order to extend the specified oil change requirement. If this option is used, PRL must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for each engine. The analysis program must be part of the maintenance plan for each engine. [40 C.F.R. § 63.6625(i)]
3. Non-Resettable Hour Meter
A non-resettable hour meter shall be installed and operated on each engine. [40 C.F.R. § 63.6625(f)]
4. Maintenance, Testing, and Non-Emergency Operating Situations
 - 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 to 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 logs) of all engine operating hours.

[40 C.F.R. § 63.6640(f) and 06-096 C.M.R. ch. 115]

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

5. Operation and Maintenance

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

6. Startup Idle and Startup Time Minimization

During periods of startup, the facility must minimize each engine's time spent at idle and minimize each engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.

[40 C.F.R. § 63.6625(h) & 40 C.F.R. Part 63, Subpart ZZZZ Table 2d]

(20) **Kilns**

- A. PRL shall not exceed a yearly throughput of 120 million board feet per year based on a 12-month rolling total. [06-096 C.M.R. ch. 115, BACT]
- B. PRL shall keep monthly records of board feet processed. [06-096 C.M.R. ch. 115, BACT]

(21) **General Process and Fugitive Emissions**

- A. Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity on a five-minute block average basis. [06-096 C.M.R. ch. 101, § 3(C)]
- B. Visible emissions from any general process source (including material handling cyclones) shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 3(B)(4)]
- C. PRL shall not cause visible emissions (not including water vapor), measured as any level of opacity, totaling twelve minutes or more in any one-hour period at ground level over any land or surrounding any buildings not owned by PRL. Opacity under this

condition shall be determined pursuant to EPA Method 22, *Visible Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares*, 40 C.F.R. Part 60, Appendix A. [06-096 C.M.R. ch. 115, BACT]

- D. PRL shall keep records of any maintenance activities (planned or unplanned) performed on any material handling cyclone. [06-096 C.M.R. ch. 115, BACT]

(22) **Annual Emission Statements**

- A. In accordance with *Emission Statements*, 06-096 C.M.R. ch. 137, PRL shall annually report to the Department, in a format prescribed by the Department, the information necessary to accurately update the State's emission inventory. The emission statement shall be submitted as specified by the date in 06-096 C.M.R. ch. 137.

- B. PRL shall keep the following records in order to comply with 06-096 C.M.R. ch. 137:

1. Hours of operation of Boilers #1 - #3 to calculate throughput as described in Section II(C)(4) of this license and to calculate annual emissions of pollutants;
2. Monthly calculated emissions of PM₁₀ and PM_{2.5} as described by this license;
3. The amount of propane fired in Boiler #4 and Kiln Heater #1 (each) on an annual basis;
4. The amount of distillate fuel fired in Fire Pumps #1 and #2 (each) and Generator #1 on an annual basis;
5. The sulfur content of the distillate fuel fired in Fire Pumps #1 and #2;
6. Kiln throughput on a monthly basis; and
7. Hours each emission unit was active or operating on a monthly basis.

[06-096 C.M.R. ch. 137]

- C. Beginning with reporting year 2023 and every third year thereafter, PRL shall report to the Department emissions of hazardous air pollutants as required by 06-096 C.M.R. ch. 137, § (3)(C). PRL shall pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3). [38 M.R.S. § 353-A(1-A)]

- (23) If the Department determines that any parameter value pertaining to construction and operation of the proposed emissions units, including but not limited to stack size, configuration, flow rate, emission rates, nearby structures, etc., deviates from what was submitted in the application or ambient air quality impact analysis for this air emission license, PRL may be required to submit additional information. Upon written request from the Department, PRL 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 17th DAY OF AUGUST, 2022.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:  for
MELANIE LOYZIM, COMMISSIONER

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

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 6/15/2022

Date of application acceptance: 6/15/2022

Date filed with the Board of Environmental Protection:

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

