



DEPARTMENT ORDER

**MSAD #20
Aroostook County
Fort Fairfield, Maine
A-1063-71-B-R**

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

FINDINGS OF FACT

After review of the air emission license renewal application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes (M.R.S.) § 344 and § 590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

MSAD #20 has applied to renew their Air Emission License permitting the operation of emission sources associated with their educational facility.

MSAD #20 has requested that resinated wood chips be specifically listed as a fuel that is allowed to be combusted in their existing wood-fired boiler (Boiler #3). Resinated wood chips are a by-product from JM Huber's engineered wood manufacturing facility located in Easton.

The equipment addressed in this license is located at 28 High School Drive, Fort Fairfield, ME.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Boilers

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type, % S	Installation Date	Stack #
Boiler #1	3.1	22.1 gal/hour	Distillate Fuel, 0.5% S	1993	1
Boiler #2	3.1	22.1 gal/hour	Distillate Fuel, 0.5% S	1997	1
Boiler #3	3.0	0.36 ton/hour	Biomass, negligible	2011	2
Boiler #4	2.0	13.9 gal/hour	Distillate Fuel, 0.5% S	1991	3
Boiler #5	2.0	13.9 gal/hour	Distillate Fuel, 0.5% S	1991	3

Emergency Generators

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type, % sulfur	Installation Date
Generator #1	0.73	5.3 gal/hour	Distillate Fuel, 0.0015% S	2003

C. Definitions

Distillate Fuel. For the purposes of this license, *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.

Resinated wood. For the purposes of this license, *Resinated wood* means the following:

wood products (containing binders and adhesives) produced by primary and secondary wood products manufacturing. Resinated wood includes residues from the manufacture and use of resinated wood, including materials such as board trim, sander dust, panel trim, and off-specification resinated wood products that do not meet a manufacturing quality or standard.

D. Application Classification

All rules, regulations, or statutes referenced in this air emission license refer to the amended version in effect as of the issued date of this license.

The application for MSAD #20 does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of currently licensed emission units only and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (C.M.R.) ch. 115.

MSAD #20 is licensed below the major source thresholds for hazardous air pollutants (HAP) and is considered an area source of 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 06-096 C.M.R. 100. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Boilers #1, #2, #4 & #5

Boilers #1 and #2 each have a maximum design capacity of 3.1 MMBtu/hour and fire distillate fuel at a rate of 22.1 gallons/hour. Boilers #1 and #2 were manufactured and installed in 1993 and 1997, respectively. Both boilers exhaust through common Stack #1.

Boilers #4 and #5 each have a maximum design capacity of 2.0 MMBtu/hour and fire distillate fuel at a rate of 13.9 gallons/hour. Boilers #4 and #5 were both manufactured and installed in 1991. Both boilers exhaust through common Stack #3.

1. BPT Findings

The BPT emission limits for Boilers #1, #2, #4 and #5 were based on the following:

PM/PM ₁₀	0.12 lb/MMBtu based on 06-096 C.M.R. ch. 103
SO ₂	0.5 lb/MMBtu, firing 0.5% S distillate fuel
NO _x	0.3 lb/MMBtu, 2011 BACT determination (A-1063-A-N)
CO	5.0 lb/1000 gallons, AP-42, Table 1.3-1, dated 5/10
VOC	0.2 lb/1000 gallons, AP-42, Table 1.3-3, dated 5/10
Opacity	06-096 CMR 115, BPT

The BPT emission limits for Boilers #1 and #2 are the following:

Equipment	Pollutant	lb/MMBtu
Boilers #1 & #2	PM	0.12

Emissions from Boilers #1, #2, #4 and #5 shall not exceed the following:

Equipment	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	0.37	0.37	1.56	0.93	0.11	0.01
Boiler #2	0.37	0.37	1.56	0.93	0.11	0.01
Boiler #4	0.23	0.23	0.98	0.58	0.07	0.01
Boiler #5	0.23	0.23	0.98	0.58	0.07	0.01

Visible emissions from Boilers #1, #2, #4 and #5 shall each not exceed 20% opacity on a six-minute block average basis.

Fuel Sulfur Content Requirements

Boilers #1, #2, #4 and #5 are each licensed to fire distillate fuel which, by definition, has a sulfur content of 0.5% or less by weight. Per 38 M.R.S. §603-A(2)(A)(3), as of July 1, 2018, no person shall import, distribute, or offer for sale any distillate fuel with a sulfur content greater than 0.0015% by weight (15 ppm). Therefore, beginning July 1, 2018, the distillate fuel purchased or otherwise obtained for use in Boilers #1, #2, #4 and #5 shall not exceed 0.0015% by weight (15 ppm).

2. Periodic Monitoring

Periodic monitoring for Boilers #1, #2, #4 and #5 shall include recordkeeping to document fuel use both on a monthly and calendar-year total basis. Documentation shall include the type of fuel used and sulfur content of the fuel.

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

Due to their sizes, Boilers #1, #2, #4 and #5 are each not subject to the New Source Performance Standards (NSPS) 40 C.F.R. Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hour 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, #2, #4 and #5 are considered existing oil boilers and 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. [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. At this time, the Department has not taken delegation of

this area source MACT (Maximum Achievable Control Technology) rule promulgated by EPA; however, MSAD #20 is still subject to the requirements. Notification forms and additional rule information can be found on the following website: <http://www.epa.gov/ttn/atw/boiler/boilerpg.html>.

a. Compliance Dates, Notifications, and Work Practice Requirements

(1) Initial Notification of Compliance

An Initial Notification submittal to EPA was due no later than January 20, 2014. [40 CFR Part 63.11225(a)(2)]

(2) Boiler Tune-Up Program

(i) A boiler tune-up program shall be implemented. [40 CFR Part 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:

<i>Boiler Category</i>	<i>Tune-Up Frequency</i>
New or Existing Oil, Biomass and Coal fired boilers that are not designated as "Boilers with less frequent tune up requirements" listed below	Every 2 years
<i>New and Existing Oil, Biomass, and Coal fired Boilers with less frequent tune up requirements</i>	
Seasonal (see definition §63.11237)	Every 5 years
Limited use (see definition §63.11237)	Every 5 years
Oil-fired boilers with a heat input capacity of ≤5MMBtu/hr	Every 5 years
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 CFR Part 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. 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, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [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. 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, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [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, if requested, submitted to EPA. 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 twelve 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)]

- (v) After conducting the initial boiler tune-up, a Notification of Compliance Status was submitted to EPA. [40 C.F.R. § 63.11225(a)(4) and 40 C.F.R. § 63.11214(b)]

MSAD #20 submitted a Notification of Compliance Status to EPA on February 1, 2016.

(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 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 CFR §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 40 CFR §§63.11214(d) to conduct a tune-up of each applicable boiler according to 40 CFR §63.11223(b)."

C. Boiler #3

Boiler #3 has a maximum design capacity of 3.0 MMBtu/hour and fires wood chips (50% moisture content) and resinated wood chips at a rate of 0.36 tons/hour. Boiler #3 was manufactured and installed in 2011, is equipped with a multi-cyclone for PM/PM₁₀ control and exhausts through Stack #2.

1. BPT Findings

The BPT emission limits for Boiler #3 were based on the following:

PM/PM ₁₀	0.25 lb/MMBTU, 2011 BACT determination (A-1063-71-A-N)
SO ₂	0.025 lb/MMBTU, AP-42 Table 1.6-2, dated 9/03
NO _x	0.22 lb/MMBTU, AP-42 Table 1.6-2, dated 9/03
CO	0.6 lb/MMBTU, AP-42 Table 1.6-2, dated 9/03
VOC	0.017 lb/MMBTU, AP-42 Table 1.6-3, dated 9/03
Opacity	06-096 CMR 101

The BPT emission limit for Boiler #3 is the following:

Equipment	Pollutant	lb/MMBtu
Boiler #3	PM	0.25

Emissions from Boiler #3 shall not exceed the following:

Equipment	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #3	0.75	0.75	0.08	0.68	1.86	0.05

MSAD #20 shall continuously operate the multi-cyclone on Boiler #3 when Boiler #3 is in operation.

Visible emissions from Boiler #3 shall not exceed 30% opacity on a six-minute block average basis.

2. Periodic Monitoring

Periodic monitoring for Boiler #3 shall include recordkeeping to document the type and amount of fuel used (wood chips or resinated wood chips).

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

Due to its size, Boiler #3 is not subject to the New Source Performance Standards (NSPS) 40 C.F.R. Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hour 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 #3 is considered an existing biomass boiler and 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. [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. At this time, the Department has not taken delegation of this area source MACT (Maximum Achievable Control Technology) rule promulgated by EPA; however, MSAD #20 is still subject to the requirements. Notification forms and additional rule information can be found on the following website: <http://www.epa.gov/ttn/atw/boiler/boilerpg.html>.

a. Compliance Dates, Notifications, and Work Practice Requirements

(1) Initial Notification of Compliance

An Initial Notification submittal to EPA was due no later than January 20, 2014. [40 C.F.R. Part 63.11225(a)(2)]

(2) Boiler Tune-Up Program

(i) A boiler tune-up program shall be implemented. [40 C.F.R. Part 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:

<i>Boiler Category</i>	<i>Tune-Up Frequency</i>
New or Existing Oil, Biomass and Coal fired boilers that are not designated as "Boilers with less frequent tune up requirements" listed below	Every 2 years
<i>New and Existing Oil, Biomass, and Coal fired Boilers with less frequent tune up requirements</i>	
Seasonal (see definition §63.11237)	Every 5 years
Limited use (see definition §63.11237)	Every 5 years
Oil-fired boilers with a heat input capacity of ≤5MMBtu/hr	Every 5 years
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 CFR Part 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. 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, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [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. 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, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [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)]
- (i) Tune-Up Report: A tune-up report shall be maintained onsite and, if requested, submitted to EPA. 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 twelve 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 two years which covers the previous two calendar years. The report shall be maintained by the source and submitted to the Department and 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 CFR §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 40 CFR §§63.11214(d) to conduct a tune-up of each applicable boiler according to 40 CFR §63.11223(b)."

D. Emergency Generator #1

MSAD #20 operates one emergency generator, designated Generator #1, which was manufactured in 1981. Generator #1 is rated at 0.73 MMBtu/hour (75 kW) and fires distillate fuel at a rate of 5.3 gallons/hour

1. BPT Findings

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

PM/PM ₁₀	0.12 lb/MMBtu, AP-42, Table 3.3-1 (dated 10/96)
SO ₂	Combustion of 0.0015% sulfur distillate fuel
NO _x	4.41 lb/MMBtu, AP-42, Table 3.3-1 (dated 10/96)
CO	0.95 lb/MMBtu, AP-42, Table 3.3-1 (dated 10/96)
VOC	0.35 lb/MMBtu, AP-42, Table 3.3-1 (dated 10/96)
Opacity	06-096 CMR 101

The BPT emission limits for Generator #1 are the following:

Equipment	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	0.09	0.09	0.01	3.22	0.69	0.26

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

Generator #1 shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. There is no limit on emergency operation. Generator #1 shall be equipped with a non-resettable hour-meter to record operating time. To demonstrate compliance with the operating hours limit, MSAD #20 shall keep records of the total hours of operation and the hours of emergency operation for Generator #1.

Generator #1 is only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. Generator #1 is not to be used for prime power when reliable offsite power is available; nor to operate or to be contractually obligated to be available in a demand response program, during a period of deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity.

2. New Source Performance Standards (NSPS)

Due to its date of manufacture (1981), Generator #1 is 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 Generator #1 was 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 not applicable to Generator #1. Generator #1 is considered an existing, emergency stationary reciprocating internal combustion engine at an area HAP source. Generator #1 is also considered exempt from the requirements of 40 C.F.R. Part 63, Subpart ZZZZ since it is categorized as institutional emergency engine and it does not operate or is not contractually obligated to be available in a demand response program, during a period of deviation from standard voltage or frequency, or for supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in 40 C.F.R. § 63.6640(f)(4)(ii).

Operation of Generator #1 in a demand response program, during a period of deviation from standard voltage or frequency, or for supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in 40 C.F.R. § 63.6640(f)(4)(ii), would cause Generator #1 to be subject to 40 C.F.R. Part 63, Subpart ZZZZ and require compliance with all applicable requirements.

E. Annual Emissions

1. Total Annual Emissions

MSAD #20 shall be restricted to the following annual emissions, on a calendar-year basis. The tons per year limits were calculated based on MSAD #20's five boilers operating 8,760 hours/year and the operation of 100 hours/year for Generator #1.

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

Equipment	PM	PM₁₀	SO₂	NO_x	CO	VOC
Boilers #1, #2, #4 & #5	5.3	5.3	22.3	13.3	1.6	0.1
Boiler #3	3.4	3.4	0.3	3.0	8.2	0.2
Generator #1	0.1	0.1	0.1	0.2	0.1	0.1
Total TPY	8.8	8.8	22.7	16.5	9.9	0.4

2. Greenhouse Gases

Greenhouse gases are considered regulated pollutants as of January 2, 2011, through 'Tailoring' revisions made to EPA's *Approval and Promulgation of Implementation Plans*, 40 CFR Part 52, Subpart A, §52.21, *Prevention of Significant Deterioration of Air Quality* rule. Greenhouse gases, as defined in 06-096 C.M.R. 100 (as amended), are the aggregate group of the following gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. For licensing purposes, greenhouse gases (GHG) are calculated and reported as carbon dioxide equivalents (CO₂e).

The quantity of CO₂e emissions from this facility is less than 100,000 tons per year, based on the following:

- the types of fuel being fired;
- the facility's fuel use limit;
- worst case emission factors from the following sources: U.S. EPA's AP-42, the Intergovernmental Panel on Climate Change (IPCC), and 40 CFR Part 98, *Mandatory Greenhouse Gas Reporting*; and
- global warming potentials contained in 40 CFR Part 98.

No additional licensing actions to address GHG emissions are required at this time.

III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source shall be determined by the Department on a case-by case basis. In accordance with 06-096 C.M.R. 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	25
PM ₁₀	25
SO ₂	50
NO _x	100
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.

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-1063-71-B-R subject to the following conditions.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License 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 such test results, 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 Part 70 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]

SPECIFIC CONDITIONS

- (16) Boilers #1, #2, #4 & #5

A. Fuel

1. Boilers #1, #2, #4 and #5 are each licensed to fire distillate fuel. [06-096 C.M.R. ch. 115, BPT]
2. Prior to July 1, 2018, MSAD #20 shall fire distillate fuel with a maximum sulfur content not to exceed 0.5% by weight. [06-096 C.M.R. ch. 115, BPT]
3. Beginning July 1, 2018, MSAD #20 shall not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm). [06-096 C.M.R. ch. 115, BPT]
4. Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and the percent sulfur of the fuel delivered. Records of annual fuel use shall be kept on a monthly and calendar-year total basis. [06-096 C.M.R. ch. 115, BPT]

B. Emissions shall not exceed the following:

Equipment	Pollutant	lb/MMBtu	Origin and Authority
Boilers #1 & #2	PM	0.12	06-096 C.M.R. ch. 115, BPT

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

Equipment	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	0.37	0.37	1.56	0.93	0.11	0.01
Boiler #2	0.37	0.37	1.56	0.93	0.11	0.01
Boiler #4	0.23	0.23	0.98	0.58	0.07	0.01
Boiler #5	0.23	0.23	0.98	0.58	0.07	0.01

- D. Visible emissions from Boilers #1, #2, #4 and #5 shall each not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]
- E. Boiler MACT (40 C.F.R. Part 63, Subpart JJJJJ) Requirements for Boilers #1, #2, #4 and #5 [incorporated under 06-096 C.M.R. ch. 115, BPT]
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:

<i>Boiler Category</i>	<i>Tune-Up Frequency</i>
New or Existing Oil, Biomass and Coal fired boilers that are not designated as "Boilers with less frequent tune up requirements" listed below	Every 2 years
<i>New and Existing Oil, Biomass, and Coal fired Boilers with less frequent tune up requirements</i>	
Seasonal (see definition §63.11237)	Every 5 years
Limited use (see definition §63.11237)	Every 5 years
Oil-fired boilers with a heat input capacity of ≤5MMBtu/hr	Every 5 years
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 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. 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, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [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. 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, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [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, if requested, submitted to EPA. 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 Boilers #1, #2, #4 and #5, 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 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 40 C.F.R. § 63.11214(d) to conduct a tune-up of each applicable boiler according to 40 C.F.R. § 63.11223(b)."

(17) Boiler #3

A. Fuel

1. Boiler #3 is licensed to burn wood chips and resinated wood chips [06-096 C.M.R. ch. 115, BPT]
 2. Compliance shall be demonstrated by fuel records from the supplier(s) showing the quantity and type of fuel delivered. Records of annual fuel use shall be kept on a monthly and calendar-year total basis. [06-096 C.M.R. ch. 115, BPT]
- B. MSAD #20 shall continuously operate the multi-cyclone on Boiler #3 when Boiler #3 is in operation. MSAD #20 shall maintain a log detailing all routine and non-routine

maintenance on the multi-clone. The log shall include the date and maintenance description. [06-096 C.M.R. ch. 115, BPT]

C. Emissions shall not exceed the following:

Equipment	Pollutant	lb/MMBtu	Origin and Authority
Boiler #3	PM	0.25	2011 BACT (A-1063-71-A-N)

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

Equipment	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #3	0.75	0.75	0.08	0.68	1.86	0.05

E. Visible Emissions

Visible emissions from Boiler #3 shall not exceed 30% opacity on a six-minute block average basis.

F. Boiler MACT (40 C.F.R. Part 63, Subpart JJJJJ) Requirements for Boiler #3 [incorporated under 06-096 C.M.R. ch. 115, BPT]

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:

<i>Boiler Category</i>	<i>Tune-Up Frequency</i>
New or Existing Oil, Biomass and Coal fired boilers that are not designated as "Boilers with less frequent tune up requirements" listed below	Every 2 years
<i>New and Existing Oil, Biomass, and Coal fired Boilers with less frequent tune up requirements</i>	
Seasonal (see definition §63.11237)	Every 5 years
Limited use (see definition §63.11237)	Every 5 years
Oil-fired boilers with a heat input capacity of ≤5MMBtu/hr	Every 5 years
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 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. 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, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [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. 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, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [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, if requested, submitted to EPA. 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 Boiler #3, a compliance report shall be prepared by March 1st every two years which covers the previous two calendar years. The report shall be maintained by the source and submitted to the Department and 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:
 - (4) "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."
 - (5) "No secondary materials that are solid waste were combusted in any affected unit."
 - (6) "This facility complies with the requirement in 40 C.F.R. § 63.11214(d) to conduct a tune-up of each applicable boiler according to 40 C.F.R. § 63.11223(b)."

(18) Generator #1

- A. 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, BPT]
- B. MSAD #20 shall keep records that include maintenance conducted on Generator #1 and the hours of operation of Generator #1 recorded through the non-resettable hour meter. Documentation shall include the number of hours Generator #1 operated for emergency purposes, including what classified the operation as emergency, and the number of hours Generator #1 operated for non-emergency purposes. [06-096 C.M.R. ch. 115, BPT]
- C. The fuel sulfur content for Generator #1 shall be limited to 0.0015% sulfur by weight. Compliance shall be demonstrated by fuel records from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [06-096 C.M.R. ch. 115, BPT]
- D. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BPT]:

Equipment	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	0.09	0.09	0.01	3.22	0.69	0.26

E. Visible Emissions

Visible emissions from Generator #1 shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101]

- F. Generator #1 is only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. Generator #1 is not to be used for prime power when reliable offsite power is available; nor to operate or to be contractually obligated to be available in a demand response program, during a period of deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity.

(19) MSAD #20 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).

DONE AND DATED IN AUGUSTA, MAINE THIS 3 DAY OF March, 2017.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Core for
PAUL MERCER, COMMISSIONER

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

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

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: July 29, 2016

Date of application acceptance: August 12, 2016

Date filed with the Board of Environmental Protection:

This Order prepared by Kevin J Ostrowski, Bureau of Air Quality.

