



DEPARTMENT ORDER

**MSAD #17
Oxford Hills School District
Oxford County
South Paris, Maine
A-1015-71-D-M**

**Departmental
Findings of Fact and Order
Air Emission License
Amendment #1**

FINDINGS OF FACT

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

I. REGISTRATION

A. Introduction

MSAD #17 – Oxford Hills School District (Oxford Hills) was issued Air Emission License A-1015-71-C-R on May 11, 2015, for the operation of emission sources associated with their educational facility.

Oxford Hills has requested a minor revision to their license in order to:

1. Operate their generator as a non-emergency unit;
2. Correct the listed capacity for Boilers #1 and #2; and
3. Remove annual fuel limits for the boilers and paint booth heater.

The equipment addressed in this license amendment is located at 256 Main Street, South Paris, Maine.

B. Emission Equipment

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

Stationary Engines

Equipment	Max. Input Capacity (MMBtu/hr)	Rated Output Capacity	Fuel Type, % sulfur	Firing Rate (gal/hr)	Date of Manuf.	Date of Install.
Generator #1	7.8	800 KW 1,214 bhp	Distillate fuel, 0.0015%	57.2	2006	2007

Boilers

Equipment	Max. Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type, % sulfur	Date of Manuf.	Stack #
Boiler #1	4.3	31.5 gal/hr	Distillate fuel, 0.0015%	1996	1
Boiler #2	3.4	24.5 gal/hr	Distillate fuel, 0.0015%	1996	2
Boiler #3	3.7	750 lb/hr	Biomass, negligible	2010	3
Paint Booth Heater	1.0	11.1 gal/hr	Propane, negligible	Unk.	N/A

C. 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. Oxford Hills 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.

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.

This amendment will not increase actual annual emissions of any pollutant. Therefore, this amendment is determined to be a minor revision and has been processed as such.

E. Facility Classification

The facility is licensed as follows:

- As a natural minor source of air emissions, because facility emissions cannot exceed 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.

II. **BEST PRACTICAL TREATMENT (BPT)**

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 C.M.R. ch. 100. Separate control requirement categories exist for new and existing equipment.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in *Definitions Regulation*, 06-096 C.M.R. ch. 100. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

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

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

B. Revision Description

1. Operation of Generator #1 as a Non-Emergency Unit

Oxford Hills operates an emergency generator (Generator #1). The facility would like to enroll this unit in ISO New England's demand response program. However, operation of an engine for peak shaving, demand response, or to generate income for a facility by supplying power as part of a financial arrangement does not qualify as emergency use. Therefore, Oxford Hills has requested that Generator #1 be considered a non-emergency engine in order to participate in the demand response program. The facility has proposed an annual operating limit for all generator use of 100 hours/year, excluding operation during emergency situations. Updated requirements for Generator #1 are listed in its specific BPT section below.

2. Correction of Listed Capacity

Boilers #1 and #2 were previously listed as having heat input capacities of 2.8 MMBtu/hr and 2.2 MMBtu/hr respectively. However, these capacities do not align with the maximum firing rate of each boiler. The heat input capacities of each boiler have been revised based on each boiler's maximum firing rate.

3. Removal of Annual Fuel Limits

In Oxford Hills' current license, Boilers #1, #2, and #3 as well as the Paint Booth Heater each have a limit on annual fuel use. Due to the size of this equipment, the facility's potential to emit is well below significant emissions thresholds and the facility is considered a natural minor source. Additionally, the potential to emit is below thresholds for requiring an ambient air quality analysis or collection of emissions inventory information. Therefore, limiting annual fuel use and requiring monthly recordkeeping has been determined to be overly burdensome and has been removed.

To clarify requirements for Oxford Hills, the Findings of Fact in this license completely replaces those of air emission license A-1015-71-C-R.

C. Boilers #1 and #2

Oxford Hills operates Boilers #1 and #2 for heat and hot water. The maximum heat input of the boilers was previously listed incorrectly. The correct ratings for Boilers #1 and #2 are 4.3 MMBtu/hr and 3.4 MMBtu/hr, respectively, each firing distillate fuel. Both boilers were installed in 1996 and each boiler exhausts through their own separate stack.

Boilers #1 and #2 are 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, the distillate fuel purchased or otherwise obtained for use in Boilers #1 and #2 shall not exceed 0.0015% by weight (15 ppm).

1. BPT Findings

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

- PM/PM₁₀ – 0.08 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
- SO₂ – based on firing distillate fuel with a maximum sulfur content of 0.0015% by weight
- NO_x – 20 lb/1000 gal based on AP-42 Table 1.3-1 dated 5/10
- CO – 5 lb/1000 gal based on AP-42 Table 1.3-1 dated 5/10
- VOC – 0.34 lb/1000 gal based on AP-42 Table 1.3-3 dated 5/10
- Visible Emissions – 06-096 C.M.R. ch. 115, BPT

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

Unit	Pollutant	lb/MMBtu
Boiler #1	PM	0.08
Boiler #2	PM	0.08

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	0.35	0.35	0.01	0.63	0.16	0.01
Boiler #2	0.27	0.27	0.01	0.49	0.12	0.01

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

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

Due to their size, Boilers #1 and #2 are not subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989. [40 C.F.R. § 60.40c]

D. Boiler #3

Oxford Hills operates Boilers #3 for facility heating and hot water. The boiler is rated at 3.7 MMBtu/hr and fires biomass (wood chips) with an average moisture content of 45% by weight. Boiler #3 was installed in 2010 and exhausts through its own stack.

1. BPT Findings

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

- PM/PM₁₀ – 0.30 lb/MMBtu based on 06-096 C.M.R. ch. 103
- SO₂ – 0.025 lb/MMBtu based on AP-42 Table 1.6-2 dated 9/03
- NO_x – 0.22 lb/MMBtu based on AP-42 Table 1.6-2 dated 9/03
- CO – 0.60 lb/MMBtu based on AP-42 Table 1.6-2 dated 9/03
- VOC – 0.017 lb/MMBtu based on AP-42 Table 1.6-3 dated 9/03
- Visible Emissions – 06-096 C.M.R. ch. 115, BPT

The BPT emission limits for Boiler #3 are the following:

Unit	Pollutant	lb/MMBtu
Boiler #3	PM	0.30

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #3	1.11	1.11	0.09	0.81	2.22	0.06

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

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

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

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

Boilers #1, #2, and #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. Boilers #1 and #2 are considered existing oil boilers rated less than 10 MMBtu/hr. Boiler #3 is considered an existing biomass boiler 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>.

1. Compliance Dates, Notifications, and Work Practice Requirements

a. Boiler Tune-Up Program

(1) A boiler tune-up program shall be implemented. [40 C.F.R. § 63.11223]

(2) 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
Oil fired boilers with a heat input capacity of ≤ 5 MMBtu/hr (Boilers #1 and #2)	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 (Boiler #3)	Every 5 years

[40 C.F.R. § 63.11223(a) and Table 2]

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

(i) As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for oil fired boilers less than or equal to 5 MMBtu/hour and boilers with oxygen trim systems.

[40 C.F.R. § 63.11223(b)(1)]

(ii) 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)]

(iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for oil fired boilers less than or equal to 5 MMBtu/hour and boilers with oxygen trim systems. [40 C.F.R. § 63.11223(b)(3)]

(iv) Optimize total emissions of CO, consistent with manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]

(v) 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)]

(vi) 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)]

(4) Tune-Up Report: A tune-up report shall be maintained onsite and, if requested, submitted to EPA. The report shall contain the following information:

(i) 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;

(ii) A description of any corrective actions taken as part of the tune-up of the boiler; and

(iii) 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)]

(5) After conducting the initial boiler tune-up, a Notification of Compliance Status shall be submitted to EPA. [40 C.F.R. § 63.11225(a)(4) and 40 C.F.R. § 63.11214(b)] Oxford Hills submitted their Notification of Compliance Status to EPA on November 11, 2016.

b. 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)]

(1) Company name and address;

(2) A statement of whether the source has complied with all the relevant requirements of this Subpart;

(3) 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;

(4) The following certifications, as applicable:

- (i) "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."
- (ii) "No secondary materials that are solid waste were combusted in any affected unit."
- (iii) "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."

2. 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)]:

- 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.

F. Generator #1

Oxford Hills operates one stationary generator (Generator #1). This unit is a generator set consisting of an engine and an electrical generator. Generator #1 has an engine rated at 1,214 brake horsepower (bhp), approximately equivalent to 7.8 MMBtu/hr of heat input. The engine fires distillate fuel with a sulfur content of 0.0015% by weight or less. It was manufactured after April 1, 2006, and installed in 2007.

Generator #1 is primarily used as an emergency back-up generator for the facility. However, Oxford Hills wishes to have the option to participate in ISO New England's demand response program which is not included in the definition of emergency operation. Therefore, Generator #1 is being licensed as a non-emergency unit.

1. BPT Findings

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

- PM/PM₁₀ - 0.12 lb/MMBtu from 06-096 C.M.R. ch. 103
- SO₂ - combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
- NO_x - 3.2 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96
- CO - 0.85 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96
- VOC - 0.09 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96
- Opacity - 06-096 C.M.R. ch. 115, BPT

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

Unit	Pollutant	lb/MMBtu
Generator #1	PM	0.12

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	0.94	0.94	0.01	25.06	6.66	0.70

Generator #1 shall be limited to 100 hours of operation per calendar year of total use, 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, Oxford Hills shall keep records of the total hours of operation and the hours of emergency operation.

Visible emissions from Generator #1 shall not exceed 20% opacity on a six-minute block average basis except for periods of startup, during which time Oxford Hills shall comply with the following work practice standards.

- a. Oxford Hills shall maintain a log (written or electronic) of the date, time, and duration of all generator startups.
- b. Generator #1 shall be operated in accordance with the manufacturer's emission-related operating instructions.
- c. Oxford Hills shall 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. Generator #1, including any associated air pollution control equipment, shall be operated 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.

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

2. 40 C.F.R. Part 60, Subpart IIII

Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 C.F.R. Part 60, Subpart IIII is applicable to Generator #1 since it was ordered after July 11, 2005, and manufactured after April 1, 2006. [40 C.F.R. § 60.4200] By meeting the requirements of 40 C.F.R. Part 60, Subpart IIII, Generator #1 also meets the requirements found in the *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 C.F.R. Part 63, Subpart ZZZZ. [40 C.F.R. § 63.6590(c)]

A summary of the currently applicable federal 40 C.F.R. Part 60, Subpart IIII requirements is listed below.

a. Certification Requirement

Owners and operators of pre-2007 model year non-emergency engines must demonstrate compliance with the emission standards in § 60.4204(a) through one of the methods listed in § 60.4211(b). One of the available methods is purchasing an engine certified according to 40 C.F.R. Part 89 for the same model year and maximum engine power. Generator #1's engine is a model year 2006 Caterpillar model C27. The engine belongs to engine family 6CPXL27.0ESL which has a certificate of conformity (Certificate Number CPX-NR0-06-04) with 40 C.F.R. Part 89 for model year 2006.

b. Ultra-Low Sulfur Fuel Requirement

The fuel fired in the engine shall not exceed 15 ppm sulfur (0.0015% sulfur). [40 C.F.R. § 60.4207(b)]

c. Operation and Maintenance Requirements

The engine shall be operated and maintained according to the manufacturer's emission-related written instructions. Oxford Hills may only change those emission-related settings that are permitted by the manufacturer.

[40 C.F.R. § 60.4211(a)]

d. Initial Notification Requirement

No initial notification is required under 40 C.F.R. Part 60, Subpart IIII for pre-2007 model year engines which are certified. [40 C.F.R. § 60.4214(a)]

G. Paint Booths

Oxford Hills operates two paint booths, the large DeVilbiss Pressurized Cure Booth 200 and a smaller DeVilbiss Pro Clean Booth.

The paint booths are equipped with filters for control of emissions of particulate matter (PM). Emissions of PM from the paint booths are considered unquantifiable. However, Oxford Hills shall maintain the filters so as to minimize PM emissions such that visible emission from the paint booths do not exceed 10% opacity on a six (6) minute block average basis.

Oxford Hills shall not exceed the use of 250 gallons of paint in the paint booths (combined) on a calendar year basis. This restriction effectively limits emissions from the paint booths to less than 1.0 tpy of VOC. Compliance shall be demonstrated by a log (written or electronic) of the amount of paint (gallons) used in the paint booths.

BPT for the paint booths is determined to be the use of filters to limit emissions of PM, a combined throughput limit of 250 gallons/year of paint, and a visible emissions limit of 10% on a six (6) minute block average basis.

H. Paint Booth Heater

The larger paint booth has a heater with a heat input capacity of 1.0 MMBtu/hr firing propane.

1. BPT Findings

The BPT emission limits for the Paint Booth Heater were based on the following:

- PM/PM₁₀ – 0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
- SO₂ – 0.018 lb/1000 gal based on AP-42 Table 1.5-1 dated 7/08
- NO_x – 13 lb/1000 gal based on AP-42 Table 1.5-1 dated 7/08
- CO – 7.5 lb/1000 gal based on AP-42 Table 1.5-1 dated 7/08
- VOC – 1 lb/1000 gal based on AP-42 Table 1.5-1 dated 7/08
- Visible Emissions – 06-096 C.M.R. ch. 115, BPT

The BPT emission limits for the Paint Booth Heater are the following:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Paint Booth Heater	0.05	0.05	–	0.14	0.08	0.01

Visible emissions from the Paint Booth Heater shall not exceed 10% opacity on a six-minute block average basis.

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

Due to its size, the Paint Booth Heater is not subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989. [40 C.F.R. § 60.40c]

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

Gas-fired units (including propane) are exempt from *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63, Subpart JJJJJ.

I. Annual Emissions

Oxford Hills shall be restricted to the following annual emissions, based on a calendar year total. The tons per year limits were calculated based on the following:

- Operation of Boilers #1, #2, and #3 for 8,760 hours/year each;
- Operation of Generator #1 for 100 hours/year;
- Use of 250 gallons/year of paint in the paint booths; and
- Operation of the Paint Booth Heater for 8,760 hours/year.

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

	PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Boiler #1	1.5	1.5	0.1	2.8	0.7	0.1
Boiler #2	1.2	1.2	0.1	2.2	0.5	0.1
Boiler #3	4.9	4.9	0.4	3.6	9.7	0.3
Generator #1	0.1	0.1	–	1.3	0.3	0.1
Paint Booth Heater	0.2	0.2	–	0.6	0.4	0.1
Paint Booths	–	–	–	–	–	1.0
Total TPY	7.9	7.9	0.6	10.5	11.6	1.7

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
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.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards, and
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License Amendment A-1015-71-D-M subject to the following Standard and Specific Conditions.

Severability. The invalidity or unenforceability of any provision of this License Amendment or part thereof shall not affect the remainder of the provision or any other provisions. This License Amendment shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

Note: For simplicity, the following replaces the entire Order section of Air Emission License A-1015-71-C-R including all Standard and Specific Conditions.

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 and #2**

- A. Oxford Hills shall not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm). Fuel sulfur content 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, BPT]

- B. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #1	PM	0.08	06-096 C.M.R. ch. 115, BPT
Boiler #2	PM	0.08	06-096 C.M.R. ch. 115, BPT

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

Emission Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	0.35	0.35	0.01	0.63	0.16	0.01
Boiler #2	0.27	0.27	0.01	0.49	0.12	0.01

- D. Visible emissions from Boilers #1 and #2 shall each not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

(17) **Boiler #3**

- A. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #3	PM	0.30	06-096 C.M.R. ch. 103, § 2(B)(4)(a)

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

Emission Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #3	1.11	1.11	0.09	0.81	2.22	0.06

C. Visible emissions from Boiler 3 shall not exceed 30% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

(18) **40 C.F.R. Part 63, Subpart JJJJJ**

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

A. The facility shall implement a boiler tune-up program. [40 C.F.R. § 63.11223]

1. 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
Oil fired boilers with a heat input capacity of ≤ 5 MMBtu/hr (Boilers #1 and #2)	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 (Boiler #3)	Every 5 years

[40 C.F.R. § 63.11223(a) and Table 2]

2. The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:
 - a. As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for oil fired boilers less than or equal to 5 MMBtu/hour and boilers with oxygen trim systems. [40 C.F.R. § 63.11223(b)(1)]
 - b. 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)]
 - c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted for up to 72 months from the previous

inspection for oil fired boilers less than or equal to 5 MMBtu/hour and boilers with oxygen trim systems. [40 C.F.R. § 63.11223(b)(3)]

- d. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]
 - e. 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)]
 - f. 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)]
3. Tune-Up Report: A tune-up report shall be maintained onsite and, if requested, submitted to EPA. The report shall contain the following information:
- a. 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;
 - b. A description of any corrective actions taken as part of the tune-up of the boiler; and
 - c. 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)]

B. 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)]

1. Company name and address;
2. A statement of whether the source has complied with all the relevant requirements of this Subpart;
3. 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;
4. The following certifications, as applicable:
 - a. "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."

- b. "No secondary materials that are solid waste were combusted in any affected unit."
 - c. "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."
- C. 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.

(19) **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. Oxford Hills shall keep records that include the hours of operation of the engine recorded through a non-resettable hour meter. Documentation shall include the number of hours the unit operated for emergency purposes, the number of hours the unit operated for non-emergency purposes, and the reason the engine was in operation during each time. [06-096 C.M.R. ch. 115, BPT]
- C. Emissions shall not exceed the following:

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

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

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	0.94	0.94	0.01	25.06	6.66	0.70

E. Visible Emissions

Visible emissions from Generator #1 shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time Oxford Hills shall comply with the following work practice standards. [06-096 C.M.R. ch. 115, BPT]

1. Oxford Hills shall maintain a log (written or electronic) of the date, time, and duration of all generator startups.
2. Generator #1 shall be operated in accordance with the manufacturer's emission-related operating instructions.
3. Oxford Hills shall 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. Generator #1, including any associated air pollution control equipment, shall be operated 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.

**F. Generator #1 shall meet the applicable requirements of 40 C.F.R. Part 60, Subpart IIII for non-emergency generators, including the following:
[incorporated under 06-096 C.M.R. ch. 115, BPT]**

1. Certification Requirement

The engine shall be certified according to 40 C.F.R. Part 89 for the same model year and maximum engine power. [40 C.F.R. § 60.4211(b)(1)]

2. Ultra-Low Sulfur Fuel

The fuel fired in the engine shall not exceed 15 ppm sulfur (0.0015% sulfur). Compliance with the fuel sulfur content limit shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of the tank containing the fuel to be fired.

[40 C.F.R. § 60.4207(b) and 06-096 C.M.R. ch. 115, BPT]

3. Operation and Maintenance Requirements

The engine shall be operated and maintained according to the manufacturer's emission-related written instructions. Oxford Hills may only change those emission-related settings that are permitted by the manufacturer.

[40 C.F.R. § 60.4211(a)]

(20) **Paint Booths**

A. Oxford Hills shall install and maintain filters for control of PM from the paint booths. [06-096 C.M.R. ch. 115, BPT]

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

C. Oxford Hills shall not exceed a paint usage of 250 gallons per calendar year in both paint booths combined. Compliance shall be demonstrated by a log (written or electronic) of the amount of paint (gallons) used in the paint booths. [06-096 C.M.R. ch. 115, BPT]

(21) **Paint Booth Heater**

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

Emission Unit	PM (lb/hr)	PM₁₀ (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Paint Booth Heater	0.05	0.05	–	0.14	0.08	0.01

B. Visible emissions from the Paint Booth Heater shall each not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

MSAD #17
Oxford Hills School District
Oxford County
South Paris, Maine
A-1015-71-D-M

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Departmental
Findings of Fact and Order
Air Emission License
Amendment #1

- (22) Oxford Hills 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 12 DAY OF March, 2019.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Coxe for
GERALD D. REID, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-1015-71-C-R.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 12/27/18

Date of application acceptance: 1/3/19

Date filed with the Board of Environmental Protection:

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

