

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE
GOVERNOR



PATRICIA W. AHO
COMMISSIONER

**Lewiston Public Schools –
Lewiston High School
Androscoggin County
Lewiston, Maine
A-421-71-H-R**

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

FINDINGS OF FACT

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

I. REGISTRATION

A. Introduction

Lewiston Public Schools – Lewiston High School (LHS) located in Lewiston, Maine has applied to renew their Air Emission License permitting the operation of emission sources associated with their educational facility.

The equipment addressed in this license is located at 156 East Avenue, Lewiston, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Boilers

Equipment	Maximum Capacity (MMBTU/hr)	Maximum Firing Rate (scf/hr)	Fuel Type	Stack #	Installation Date
Boiler #1	2.61	2475	Natural Gas	1	2008
Boiler #2	2.61	2475	Natural Gas	2	2008
Boiler #3	2.61	2475	Natural Gas	3	2008
Boiler #4	2.61	2475	Natural Gas	4	2008
Hot Water Heater*	0.60	607	Natural Gas	-	-

* Insignificant activity as defined in 06-096 CMR 115

Generators

Equipment	Maximum Capacity (MMBTU/hr)	Maximum Firing Rate (gal/hr)	Fuel Type, % Sulfur	Installation Date
Generator #1	1.71	12.1	Diesel fuel, 0.0015%S	2008

C. Application Classification

The application for LHS 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 CMR 115 (as amended).

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 CMR 100 (as amended). 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, #3 & #4

LHS operates four boilers, designated Boilers #1, #2, #3 and #4, for heating needs. Domestic hot water is supplied by a hot water heater.

Boilers #1, #2, #3 and #4 are each rated at 2.61 MMBTU/hour and fire natural gas exclusively. Boilers #1, #2, #3 and #4 were each installed in 2008 and each boiler exhausts through its own stack, designated Stacks #1, #2, #3 and #4, each at a height of 39 feet above local ground level. The Hot Water Heater is rated at 0.6 MMBTU/hr and was also installed in 2008.

Due to their size and date of installation, Boilers #1, #2, #3 and #4 are not subject to the New Source Performance Standards (NSPS) 40 CFR 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.

1. BPT Findings

The BPT emission limits for Boilers #1, #2, #3, #4 were based on the following:

PM/PM ₁₀	0.05 lb/MMBTU, previous BACT determination
SO ₂	0.6 lb/MMscf, AP-42, Table 1.4-2, dated 7/98
NO _x	100 lb/MMscf, AP-42, Table 1.4-1, dated 7/98
CO	84 lb/MMscf, AP-42, Table 1.4-1, dated 7/98
VOC	5.5 lb/ MMscf, AP-42, Table 1.4-2, dated 7/98
Opacity	06-096 CMR 101

The pound/hour BPT emission limits for Boilers #1, #2, #3 and #4 are as follows:

Equipment	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	0.1	0.1	0.1	0.3	0.2	0.1
Boiler #2	0.1	0.1	0.1	0.3	0.2	0.1
Boiler #3	0.1	0.1	0.1	0.3	0.2	0.1
Boiler #4	0.1	0.1	0.1	0.3	0.2	0.1

Visible emissions from each boiler shall not exceed 10% on a six-minute block average basis, except for no more than one six-minute block average in a continuous three-hour period.

The total fuel use for Boilers #1, #2, #3 and #4 combined shall be included in the annual facility-wide limit of 11,000,000 standard cubic feet (scf) of natural gas, on a calendar year basis.

2. Periodic Monitoring

Periodic monitoring for the boilers shall include recordkeeping to document fuel use both on a monthly and calendar year basis. Documentation shall include the fuel records from the supplier showing the quantity and type of the fuel delivered.

3. 40 CFR Part 63 Subpart JJJJJ

Because Boilers #1, #2, #3 and #4 fire natural gas exclusively, they are not subject to the requirements in *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers Area Sources* (40 CFR Part 63 Subpart JJJJJ).

C. Generator #1

LHS operates one emergency generator (designated Generator #1), rated at 1.71 MMBTU/hr, firing 0.0015%S (15 ppm) diesel fuel at a rate of 12.1 gallons/hour. The emergency generator was manufactured and installed in 2008 and exhausts through its own stack.

1. BPT Findings

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

PM/PM ₁₀	0.12 lb/MMBTU, previous BACT determination
SO ₂	0.0015 lb/MMBTU, firing 0.0015%S (15ppm) diesel fuel
NO _x	4.41 lb/MMBTU from AP-42, Table 3.4-1, dated 10/96
CO	0.95 lb/MMBTU from AP-42, Table 3.4-1, dated 10/96
VOC	0.35 lb/MMBTU from AP-42, Table 3.4-1, dated 10/96
Opacity	06-096 CMR 101

The pound/hour BPT emission limits for Generator #1 are as follows:

Equipment	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	0.2	0.2	0.1	7.5	1.6	0.6

Visible emissions from the Generator #1 stack shall not exceed 20% on a six-minute block average basis, except for no more than two six-minute block averages in a continuous three-hour period.

Generator #1 shall be limited to 500 hours of operation, on a calendar year basis. LHS shall maintain records of the hours of 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 for more than 15 hours per calendar year 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. 40 CFR Part 63, Subpart ZZZZ

The federal regulation 40 CFR Part 63, Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines* is not applicable to the emergency generator. Generator #1 is considered an existing, emergency stationary reciprocating internal combustion engine at an area HAP source; however, it is exempt from the requirements of Subpart ZZZZ since it are categorized as a residential, commercial, or institutional emergency engine and it does not operate or is not contractually obligated to be available for more than 15 hours per calendar year 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 as specified in §63.6640(f)(4)(ii).

Operation of Generator #1 such that it exceeds 15 hours per calendar year 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 as specified in §63.6640(f)(4)(ii), would cause the generator to be subject to 40 CFR Part 63, Subpart ZZZZ, and shall comply with all applicable requirements.

D. Annual Emissions

1. Total Annual Emissions

LHS shall be restricted to the following annual emissions, on a calendar year basis:

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

Equipment	PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Boilers #1, #2 #3 and #4	0.3	0.3	0.1	0.5	0.5	0.1
Generator #1	0.1	0.1	0.1	1.9	0.4	0.2
Total TPY	0.4	0.4	0.2	2.4	0.9	0.3

The annual emissions were based on Boilers #1, #2, #3 and #4 firing a total of 11,000,000 scf/year of natural gas and Generator #1 limited to 500 hours/year of operation (firing 0.0015%S diesel fuel), both on a calendar year basis.

2. Greenhouse Gases

Greenhouse gases are considered regulated pollutants as of January 2, 2011, through 'Tailoring' revisions made to USEPA'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 CMR 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).

Based on the facility's fuel use limit(s), the worst case emission factors from AP-42, IPCC (Intergovernmental Panel on Climate Change), and Mandatory Greenhouse Gas Reporting, 40 CFR Part 98, and the global warming potentials contained in 40 CFR Part 98, LHS is below the major source threshold of 100,000 tons of CO₂e per year. Therefore, no additional licensing requirements are needed to address GHG emissions 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 CMR 115, an ambient air quality impact analysis is not required for a minor source if the total 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	100
CO	250

The total facility licensed emissions 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

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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 (BPT),
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-421-71-H-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.A. §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 CMR 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 CMR 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 CMR 115]

- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353-A. [06-096 CMR 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 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 CMR 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 CMR 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 CMR 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 CMR 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR 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 USEPA, 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 CFR 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 CMR 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 CFR 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 CMR 115]
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the USEPA 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 CMR 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 CMR 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 CMR 115]

SPECIFIC CONDITIONS

- (16) **Boilers #1, #2, #3 and #4**

A. Fuel

1. Total fuel use for Boilers #1, #2, #3 and #4 combined shall not exceed 11,000,000 standard cubic feet (scf) of natural gas, on a calendar year basis. [06-096 CMR 115, BPT]
2. Compliance shall be demonstrated by fuel records from the supplier showing the quantity and type of fuel delivered. Records of annual fuel use shall be kept on a monthly and calendar year basis. [06-096 CMR 115, BPT]

B. Emissions shall not exceed the following:

Equipment	Pollutant	lb/MMBTU	Origin and Authority
Boilers #1, #2, #3 & #4	PM	0.05	06-096 CMR 115, BACT

C. Emissions shall not exceed the following [06-096 CMR 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	0.1	0.1	0.1	0.3	0.2	0.1
Boiler #2	0.1	0.1	0.1	0.3	0.2	0.1
Boiler #3	0.1	0.1	0.1	0.3	0.2	0.1
Boiler #4	0.1	0.1	0.1	0.3	0.2	0.1

- D. Visible emissions from each boiler stack shall not exceed 10% opacity on a six-minute block average, except for no more than one six-minute block average in a continuous three-hour period. [06-096 CMR 101]

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- (18) LHS 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.A. §605).

DONE AND DATED IN AUGUSTA, MAINE THIS 23 DAY OF May, 2013.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:

Marc Allen Robert Cone for
PATRICIA W. AHO, COMMISSIONER

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

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

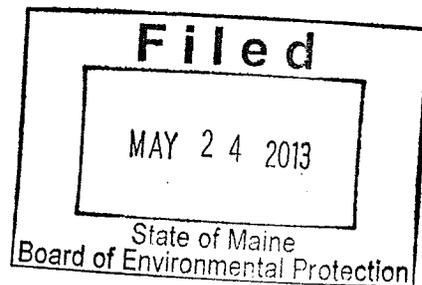
PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: October 1, 2012

Date of application acceptance: October 2, 2012

Date filed with the Board of Environmental Protection:

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



(17) **Generator #1**

- A. Generator #1 shall be limited to 500 hours of operation, on a calendar year basis. Compliance shall be demonstrated by a written log of all generator operating hours. [06-096 CMR 115]
- B. The fuel oil sulfur content for Generator #1 shall be limited to 0.0015% sulfur. 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 CMR 115, BPT]
- C. Emissions from Generator #1 shall not exceed the following:

Equipment	Pollutant	lb/MMBTU	Origin and Authority
Generator #1	PM	0.12	06-096 CMR 103(2)(B)(1)(a)

- D. Emissions from Generator #1 shall not exceed the following [06-096 CMR 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	0.2	0.2	0.1	7.5	1.6	0.6

- E. Visible Emissions

Visible emissions from the Generator #1 stack shall not exceed 20% on a six-minute block average basis, except for no more than two six-minute block averages in a continuous three-hour period. [06-096 CMR 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 for more than 15 hours per calendar year 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.