



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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Maine Administrative School District #61
Lake Region High School
Cumberland County
Naples, Maine
A-122-71-G-R/A

Departmental
Findings of Fact and Order
Air Emission License
Renewal/Amendment

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

Maine Administrative School District #61, Lake Region High School (Lake Region) located at 1877 Roosevelt Trail, Naples, Maine has requested a renewal and amendment to their existing air license. The air emissions license is for fuel burning equipment including oil units and the installation of a new biomass heating unit (which replaced an existing oil fired unit) at the school's buildings.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Boilers

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type	Install. Date	Stack #
Boiler #1	4.9	35 gal/hr	#2 fuel oil *	1987	1
Boiler #2	4.9	35 gal/hr	#2 fuel oil *	1987	1
Boiler #3	5.2	870 lb/hr	Wood pellets	2009	1

* meets the criteria of ASTM D396 #2 fuel oil

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1235 CENTRAL DRIVE, SKYWAY PARK
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C. Application Classification

Lake Region is classified as an existing source that is applying to renew and amend its air emission license, after the fact. A source is considered a major source based on whether or not expected emissions exceed the "Significant Emission Levels" as defined in the Department's regulations. The emissions for the source are determined by the maximum future license allowed emissions, as follows:

Pollutant	Max. Future License (TPY)	Sig. Level
PM	1.5	100
PM ₁₀	1.5	100
SO ₂	2.9	100
NO _x	4.4	100
CO	1.0	100
VOC	0.2	50
CO _{2e}	<100,000	100,000

The Department has determined Lake Region is a natural minor source and the application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended). All criteria pollutants emitted from the existing units (licensed for the first time) are subject to Best Available Control Technology (BACT) requirements.

D. Regulatory Review

Provided in this section is a summary of State and Federal air regulations that apply to the existing emission sources at Lake Region. The source currently utilizes and has selected specific equipment that will achieve compliance with the following State and Federal air regulations.

State Air Regulations

06-096 CMR 101 Visible Emission Regulation

This rule establishes opacity limitations for emissions from several categories of air contaminant sources. The oil-fired boilers and wood pellet boiler are subject to Sections (2)(B)(1)(b) and (2)(B)(1)(e) which limits visible emissions from any unit firing fuel oil or wood respectively. The BACT limit will be as least as stringent and therefore the oil-fired and wood fired units will each be limited to an

opacity of 20 percent on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 3-hour period.

06-096 CMR Fuel Burning Equipment Particulate Emission Standard

06-096 CMR 103 of the Maine DEP Regulations applies to the three licensed units (Boilers #1, #2, #3) since they are greater than 3 MMBTU/hour in size. 06-096 CMR 103 limits the particulate matter emissions from these units to 0.12 pounds per million Btu of heat input. The wood pellet boiler will meet the more stringent BACT particulate emission limit of 0.1 lb/MMBtu.

06-096 CMR 106 Low Sulfur Fuel Regulation

This rule establishes the maximum sulfur content of fossil fuels allowed to be burned in various air quality control regions in the state unless the source is equipped with Sulfur Dioxide (SO₂) controls or is subject to more stringent sulfur limitations by other requirements. Lake Region is subject to this rule because the existing oil-fired boilers each burn a liquid fossil fuel. As such, Lake Region is limited to a fuel sulfur content of 2.0% by weight in its liquid fossil fuels, however, the Best Available Control Technology (BACT) analysis requires a more stringent limit.

06-096 CMR 115 Major and Minor Source Air Emission License Regulations

This rule specifies who must obtain an air emission license, describes the information an applicant must submit for a license, and describes the standards and criteria that must be complied with during and following the air licensing process. For minor sources such as Lake Region, 06-096 CMR 115 (as amended) serves as an operating licensing program and a pre-construction license review program.

Federal Air Regulations

New Source Performance Standards (NSPS)

40 CFR Part 60 Subpart Dc – Lake Region's existing boilers are rated below 10 MMBtu/hr and therefore 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/hr manufactured after June 9, 1989.

National Emissions Standards for Hazardous Air Pollutants (NESHAP)

40 CFR Part 63 Subpart JJJJJJ, “*National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers*”.

Boilers #1, #2, and #3 are subject to EPA’s National Emission Standard for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial and Institutional Boilers located at Area HAP Sources, as contained in 40 CFR Part 63, Subpart JJJJJJ. Compliance with this Subpart will require Lake Region to submit an initial notice to EPA, as well as to perform periodic tune-ups on the boilers and to keep certain records.

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

B. Facility Description

Lake Region operates two small oil-fired boilers (Boilers #1 and #2) and one wood pellet boiler (Boiler #3) which are used to provide heat and hot water. Boiler #3 burns wood pellets and replaced a 8.7 MMBtu/hr oil fired unit in 2009. The pellet boiler is capable of burning different grades of wood pellets. The pellet fuel will be delivered to the school by transport truck which will pneumatically unload the pellets into a storage silo. Pellets will be fed into the boiler’s firebox which is equipped with a moving grate. The fuel is gasified on the grate and the resulting combustible gases are mixed with secondary combustion air and burned. The combustion gases come into contact with horizontal heat exchanger tubes within the boiler for transferring thermal energy to the boiler water. The hot water is then distributed to the school facilities. A flue gas blower vents the boiler’s combustion gases to a common stack.

Lake Region also has a parts washer at its #1 Bus Garage location. This parts washer uses a Safety Kleen solvent and is required to meet the requirements of 06-096 CMR 130 "Solvent Cleaners".

C. BACT for the wood pellet boiler (Boiler #3)

Particulate Matter (PM)

The combustion of solid fuel such as wood creates particulate matter primarily in the form of ash particles that can become entrained in the combustion gas.

Identification and Evaluation of PM Control Technologies

PM emission control devices applicable to conventional biomass-fired boilers include cyclonic separators, wet scrubbers, electrified filter beds, electrostatic precipitators (ESPs), and fabric filters. The use of a PM control device on a wood-fired boiler is appropriate in situations where the uncontrolled emission rate from the furnace is sufficient to warrant the capital investment and operating costs associated with the control equipment. Boiler #3 has been designed to achieve low PM emission rates without the use of a separate control device. To meet BACT, Lake Region through combustion control will limit maximum PM emissions to a rate of 0.10 lbs/MMBTU. The resulting potential annual PM emissions from the pellet boiler will be less than 2 tons per year. The use of an add-on PM control device would not be cost-effective and does not represent BACT for this boiler.

Selection of BACT for PM

Lake Region will meet BACT for PM by limiting the emissions to 0.10 lb/MMBTU. The PM and PM₁₀ lb/hr emission limits are derived from the PM lb/MMBTU emission limit.

Nitrogen Oxides (NO_x)

NO_x is formed during the combustion of biomass in boilers. "Thermal" NO_x is formed when atmospheric nitrogen and oxygen present in the combustion air supply react with each other due to high combustion temperatures. "Fuel" NO_x is formed when nitrogen present in the fuel source is oxidized during combustion. The biomass fuel to be burned in Lake Region's Boiler #3 will contain relatively small amounts of nitrogen.

With proper combustion controls, NO_x emissions from small biomass boilers can generally be limited to relatively low levels. The potential annual NO_x emissions from Lake Region's pellet boiler will be less than 3 tons per year through the use of combustion controls. The use of additional NO_x control techniques would not be cost-effective and do not represent BACT for this boiler.

Selection of BACT for NO_x

Lake Region shall limit the boiler's NO_x emissions to 1.6 lbs/hr and will meet BACT through the use of the boiler's combustion control system.

Sulfur Dioxide (SO₂)

The combustion of biomass fuel in a boiler will result in SO₂ emissions as a result of the oxidation of small amounts of naturally occurring sulfur in the fuel. Biomass fuels contain inherently low sulfur levels.

Selection of BACT for SO₂

Lake Region will meet a BACT lb/hr emission limit of 0.2 for SO₂ through the use of biomass fuel.

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

CO and VOC are formed as a result of incomplete combustion of organic material in the furnace.

Identification and Evaluation of CO and VOC Control Technologies

Combustion Controls

CO and VOC emissions are controlled by maintaining proper combustion conditions within the furnace. This involves control of excess air levels, distribution of combustion air within the furnace, achieving proper gas turbulence and residence time, and other factors.

Add-on Emission Controls

Oxidation catalysts have been used in limited instances on large biomass boiler plants to control emissions of CO. An oxidation catalyst also reduces VOC emissions, although to a lesser degree. Use of an oxidation catalyst on Lake Region's pellet boiler would not be economically feasible.

Selection of BACT for CO and VOC

Lake Region will meet BACT by using combustion controls to minimize emissions of CO and VOC. Based on emission test data provided by the boiler manufacturer, Lake Region shall limit the boiler's CO and VOC emissions to 0.6 lbs/hr and 0.1 lbs/hr, respectively.

1. BACT Findings for Boiler #3

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

- PM/PM₁₀ – 0.10 lb/MMBtu based on 06-093 CMR 115, BACT
- SO₂ – 0.025 lb/MMBtu based on AP-42 dated 2003 for wood fired boilers
- NO_x – 0.30 lb/MMBtu based on manufacturer data
- CO – 0.10 lb/MMBtu based on manufacturer data
- VOC – 0.01 lb/MMBtu, based on manufacturer data

The BACT emission limits for the boiler 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)
Boiler #3 (5.2 MMBtu/hr) wood pellets	0.6	0.6	0.2	1.6	0.6	0.1

Visible emissions from the combined stack (Stack #1) shall not exceed 20% opacity on a 6 minute block average, except for no more than one (1) six (6) minute block average in a 3 hour period.

2. Periodic Monitoring

Lake Region shall be limited to 1200 tons/yr of wood pellets. Periodic monitoring for the boiler shall include recordkeeping to document fuel use on a calendar year basis.

3. 40 CFR Part 63 Subpart JJJJJ

Boiler #3 may be subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* (40 CFR Part 63 Subpart JJJJJ). The unit is considered a boiler rated less than 10 MMBtu/hr.

For informational purposes, a summary of the currently applicable federal 40 CFR 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 Lake Region 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

i. Initial Notification of Compliance

An Initial Notification submittal to EPA is due no later than January 20, 2014 or for new sources - within 120 days after the source becomes subject to the standard. [40 CFR Part 63.11225(a)(2)]

ii. Boiler Tune-Up Program

(a) A boiler tune-up program shall be implemented to include the initial tune-up of applicable boilers no later than March 21, 2014. [40 CFR Part 63.11196(a)(1)] Note: new sources that have applicable work practice standards or management practices are not required to complete an initial performance tune-up. [40 CFR Part 63.11210(f)]

(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 for boilers greater than 5 MMBtu/hr or 72 months from the previous inspection for oil fired boilers less than 5 MMBtu/hr, boilers with oxygen trim system, seasonal boilers, and limited use boilers. [40 CFR Part 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 CFR Part 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 for boilers greater than 5 MMBtu/hr or 72 months from the previous inspection for oil fired boilers less than 5 MMBtu/hr, boilers with oxygen trim system, seasonal boilers, and limited use boilers. [40 CFR Part 63.11223(b)(3)]

4. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 CFR Part 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 CFR Part 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 CFR Part 63.11223(b)(7)]
- (c) After conducting the initial boiler tune-up, a Notification of Compliance Status shall be submitted to EPA no later than July 19, 2014. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(b)]
- (d) The facility shall implement a boiler tune-up program after the initial tune-up and initial compliance report (called a Notification of Compliance Status) has been submitted.
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
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
New Biomass Boilers with less frequent tune up requirements	
Seasonal (see definition §63.11237)	Every 5 years
Limited use (see definition §63.11237)	Every 5 years
With a heat input capacity of <5MMBtu/hr	Every 5 years

[40 CFR Part 63.11223(a) and Table 2]

2. The tune-up compliance report shall be maintained onsite and, if requested, submitted to EPA. The report shall contain the concentration of CO in the effluent stream (ppmv) and oxygen in volume percent, measured at high fire or typical operating

load, before and after the boiler tune-up, a description of any corrective actions taken as part of the tune-up of the boiler, and the types and amounts of fuels used over the 12 months prior to the tune-up of the boiler. [40 CFR Part 63.11223(b)(6)]

The compliance report shall also include the company name and address; a compliance statement signed by a responsible official certifying truth, accuracy, and completeness; and a description of any deviations and corrective actions. [40 CFR Part 63.11225(b)]

- (e) A Notification of Compliance Status shall be submitted to EPA no later than July 19, 2014. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(c)]

b. Recordkeeping

Records shall be maintained consistent with the requirements of 40 CFR Part 63 Subpart JJJJJ including the following [40 CFR Part 63.11225(c)]: copies of notifications and reports with supporting compliance documentation; 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; documentation of fuel type(s) used monthly by each boiler; the occurrence and duration of each malfunction of the boiler; and actions taken during periods of malfunction to minimize emissions and actions taken to restore the malfunctioning boiler to its usual manner of operation. Records shall be in a form suitable and readily available for expeditious review.

Note: EPA will require submission of Notification of Compliance Status reports for tune-ups and energy assessments through their electronic reporting system. However, the system will not be in place until October 2013, so sources may submit the written NOCS to the EPA Administrator. [63.1125(a)(4)(vi)]

D. BPT for oil-fired boilers (Boilers #1 and #2)

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.

SO₂

Techniques available for limiting SO₂ emissions from oil-fired boilers include SO₂ scrubbing systems and use of low sulfur oil. For boilers of this size and fuel type, SO₂ scrubbing systems are not economically practical, as the uncontrolled SO₂ emission levels are already low. Lake Region will meet BACT for SO₂ by using fuel oil that meets the criteria of ASTM D396 for #2 fuel oil.

NO_x

NO_x control techniques are generally organized into two separate groups: combustion controls, and post-combustion controls. Combustion controls affect the combustion conditions to minimize the formation of NO_x, while post-combustion controls remove NO_x after it has formed. Combustion controls that can be employed to minimize NO_x formation on oil-fired boilers include low NO_x burners and flue gas recirculation (FGR). Post-combustion NO_x control technologies include SNCR and SCR. Neither SCR nor SNCR would be technically feasible to retrofit onto the small oil-fired boilers at the Lake Region facilities. With potential annual NO_x emissions from all oil-fired boilers combined being only 2 ton per year, it would not be cost-effective to retrofit any of the existing oil-fired boilers with new low NO_x burners or FGR equipment. Lake Region will meet BACT for NO_x emissions using the boilers' existing combustion controls.

CO, PM, and VOC

Emissions of CO, PM and VOC from small #2 oil-fired boilers are generally very low. Emission control equipment is not economically practical. Lake Region will meet BACT for these pollutants through the use of the boilers' existing combustion controls.

1. BPT Findings

The BPT emission limits for the oil boilers were based on the following:

- PM/PM₁₀ – 0.12 lb/MMBtu based on 06-096 CMR 115, BPT
- SO₂ – based on firing ASTM D396 compliant #2 fuel oil (0.5% sulfur); 0.5 lb/MMBtu
- NO_x – 0.35 lb/MMBtu based on previous licenses
- CO – 5 lb/1000 gal, AP-42, Table 1.3-1, dated 5/10
- VOC – 0.2 lb/1000 gal, AP-42, Table 1.3-3, dated 5/10

The BPT emission limits for the boilers 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)
Boiler #1	0.6	0.6	2.5	2.0	0.2	0.1
Boiler #2	0.6	0.6	2.5	2.0	0.2	0.1

Visible emissions from the combined stack (Stack #1) shall not exceed 20% opacity on a 6 minute block average basis, except for no more than one (1) six (6) minute block average in a 3 hour period.

2. Periodic Monitoring

Lake Region shall be limited to firing 75,000 gallons/year of #2 fuel oil in the oil fired boilers. Periodic monitoring for the boilers shall include recordkeeping to document fuel use on a calendar year basis. Documentation shall include the type of fuel used.

Prior to January 1, 2016 or by the date otherwise stated in 38 MRSA §603-A(2)(A)(3), the #2 fuel oil fired at the Lake Region shall be ASTM D396 compliant #2 fuel oil (maximum sulfur content of 0.5% by weight). Per 38 MRSA §603-A(2)(A)(3), beginning January 1, 2016 or on the date specified in the statute, the facility shall fire #2 fuel oil with a maximum sulfur content limit of 0.005% by weight (50 ppm), and beginning January 1, 2018 or on the date specified in the statute, the facility shall fire #2 fuel oil with a maximum sulfur content limit of 0.0015% by weight (15 ppm). The specific dates contained in this paragraph reflect the current dates in the statute as of the effective date of this license; however, if the statute is revised, the facility shall comply with the revised dates upon promulgation of the statute revision.

3. 40 CFR Part 63 Subpart JJJJJ

The oil boilers may be subject to the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources (40 CFR Part 63 Subpart JJJJJ). The units are considered existing oil boilers, rated less than 10 MMBtu/hr.

For informational purposes, a summary of the currently applicable federal 40 CFR 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 Lake Region 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

i. Initial Notification of Compliance

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

ii. Boiler Tune-Up Program

(a) A boiler tune-up program shall be implemented to include the initial tune-up of applicable boilers no later than March 21, 2014. [40 CFR Part 63.11196(a)(1)]

(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 for boilers greater than 5 MMBtu/hr or 72 months from the previous inspection for oil fired boilers less than 5 MMBtu/hr, boilers with oxygen trim system, seasonal boilers, and limited use boilers. [40 CFR Part 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 CFR Part 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 for boilers greater than 5 MMBtu/hr or 72 months from the previous inspection for oil fired boilers less than 5 MMBtu/hr, boilers with oxygen trim system, seasonal boilers, and limited use boilers. [40 CFR Part 63.11223(b)(3)]
4. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 CFR Part 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 CFR Part 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 CFR Part 63.11223(b)(7)]

(c) After conducting the initial boiler tune-up, a Notification of Compliance Status shall be submitted to EPA no later than July 19, 2014. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(b)]

(d) The facility shall implement a boiler tune-up program after the initial tune-up and initial compliance report (called a Notification of Compliance Status) has been submitted.

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.

Boiler Category	Tune-Up Frequency
With a heat input capacity of <5MMBtu/hr	Every 5 years

[40 CFR Part 63.11223(a) and Table 2]

2. The tune-up compliance report shall be maintained onsite and, if requested, submitted to EPA. The report shall contain the concentration of CO in the effluent stream (ppmv) and oxygen in volume percent, measured at high fire or typical operating load, before and after the boiler tune-up, a description of any corrective actions taken as part of the tune-up of the boiler, and the types and amounts of fuels used over the 12 months prior to the tune-up of the boiler. [40 CFR Part 63.11223(b)(6)]

The compliance report shall also include the company name and address; a compliance statement signed by a responsible official certifying truth, accuracy, and completeness; and a description of any deviations and corrective actions. [40 CFR Part 63.11225(b)]

(e) A Notification of Compliance Status shall be submitted to EPA no later than July 19, 2014. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(c)]

b. Recordkeeping

Records shall be maintained consistent with the requirements of 40 CFR Part 63 Subpart JJJJJJ including the following [40 CFR Part 63.11225(c)]: copies of notifications and reports with supporting compliance documentation; 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; documentation of fuel type(s) used monthly by each boiler; the occurrence and duration of each malfunction of the boiler; and actions taken during periods of malfunction to minimize emissions and actions taken to restore the malfunctioning boiler to its usual manner of operation. Records shall be in a form suitable and readily available for expeditious review.

Note: EPA will require submission of Notification of Compliance Status reports for tune-ups and energy assessments through their electronic reporting system. However, the system will not be in place until October 2013, so sources may submit the written NOCS to the EPA Administrator. [63.1125(a)(4)(vi)]

E. Solvent Degreasers

Lake Region operates one parts washer located in the "#1 Bus Garage" of the school campus. The total VOC emissions from the solvent degreaser are less than one ton annually. Lake Region shall meet the applicable requirements of 06-096 CMR 130 of the Department regulations.

F. General Process Emissions

Lake Region operates a cyclone dust collector located in the Vocational section of the school. BPT for visible emissions from this general process' dust collector shall not exceed an opacity of 20% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. This is as stringent as 06-096 CMR 101 of the Department's regulation for opacity from general processes.

G. Annual Emissions

1. The potential annual emissions from Lake Region's site are based on a maximum annual fuel oil consumption level of 75,000 gallons for the oil-fired boilers and a maximum annual wood pellet fuel consumption level of 1200 tons. Lake Region's actual consumption levels for fuel oil and wood pellets are expected to be significantly less than the maximum levels listed above. The maximum fuel consumption levels listed above were selected to ensure that the annual potential emissions were conservatively calculated.

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 and #2	0.7	0.7	2.7	2.1	0.2	0.1
Boiler #3	0.8	0.8	0.2	2.3	0.8	0.1
Total TPY	1.5	1.5	2.9	4.4	1.0	0.2

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 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, Lake Region 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	50
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

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-122-71-G-R/A 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 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 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 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 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) **Boiler #1 and Boiler #2**

A Fuel

1. Total ASTM D396 #2 fuel use for the boilers shall not exceed 75,000 gal/yr, based on a calendar year basis.
2. Prior to January 1, 2016 or on the date specified in 38 MRSA §603-A(2)(A)(3), the #2 fuel oil fired in the boilers shall be ASTM D396 compliant (max. sulfur content of 0.5% by weight). [06-096 CMR 115, BPT]
3. Beginning January 1, 2016 or on the date specified in 38 MRSA §603-A(2)(A)(3), the facility shall fire #2 fuel oil with a maximum sulfur content limit of 0.005% by weight (50 ppm). [38 MRSA §603-A(2)(A)(3)]
4. Beginning January 1, 2018 or on the date specified in 38 MRSA §603-A(2)(A)(3), the facility shall fire #2 fuel oil with a maximum sulfur content limit of 0.0015% by weight (15 ppm). [38 MRSA §603-A(2)(A)(3)]
5. Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and the percent sulfur of the fuel delivered (if applicable). Records of annual fuel use shall be kept on a calendar year basis. [06-096 CMR 115, BPT]

B. Emissions from each boiler shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #1 and #2	PM	0.12	06-096 CMR 115, BPT

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

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	0.6	0.6	2.5	2.0	0.2	0.1
Boiler #2	0.6	0.6	2.5	2.0	0.2	0.1

D. Visible emissions from the combined stack (Stack #1) shall not exceed 20% opacity on a 6 minute block average, except for no more than one (1) six (6) minute block average in a 3 hour period. [06-096 CMR 115, BACT]

(17) **Boiler #3**

A. Lake Region shall fire wood pellets in Boiler #3 as described in this air emissions license. Lake Region shall be limited to 1200 tons/yr of wood pellets. Lake Region shall maintain purchase records to document fuel use on a calendar year basis.

B. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #3	PM	0.10	06-096 CMR 115, BACT

C. Emissions shall not exceed the following: [06-096 CMR 115, BACT]

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	0.6	0.6	0.2	1.6	0.6	0.1

D. Visible emissions from the combined stack (Stack #1) shall not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a continuous 3-hour period. [06-096 CMR 115, BACT]

(18) **Cyclone Dust Collector**

Visible emissions from the Cyclone Dust Collector shall not exceed an opacity of 20% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. [06-096 CMR 101]

(19) **Parts Washer**

The parts washer at Lake Region is subject to *Solvent Cleaners*, 06-096 CMR 130 (as amended).

A. Lake Region shall keep records of the amount of solvent added to each parts washer. [06-096 CMR 115, BPT]

B. The following are exempt from the requirements of 06-096 CMR 130 [06-096 CMR 130]:

1. Solvent cleaners using less than two liters (68 oz) of cleaning solvent with a vapor pressure of 1.00 mmHg, or less, at 20° C (68° F);
2. Wipe cleaning; and,
3. Cold cleaning machines using solvents containing less than or equal to 5% VOC by weight.

C. The following standards apply to cold cleaning machines that are applicable sources under Chapter 130. This regulation is currently being revised and upon final adoption additional recordkeeping and/or conditions may apply.

1. Lake Region shall attach a permanent conspicuous label to each unit summarizing the following operational standards [06-096 CMR 130]:

- (i) Waste solvent shall be collected and stored in closed containers.
- (ii) Cleaned parts shall be drained of solvent directly back to the cold cleaning machine by tipping or rotating the part for at least 15 seconds or until dripping ceases, whichever is longer.
- (iii) Flushing of parts shall be performed with a solid solvent spray that is a solid fluid stream (not a fine, atomized or shower type spray) at a pressure that does not exceed 10 psig. Flushing shall be performed only within the freeboard area of the cold cleaning machine.
- (iv) The cold cleaning machine shall not be exposed to drafts greater than 40 meters per minute when the cover is open.
- (v) Sponges, fabric, wood, leather, paper products and other absorbent materials shall not be cleaned in the degreaser.
- (vi) When a pump-agitated solvent bath is used, the agitator shall be operated to produce no observable splashing of the solvent against the tank walls or the parts being cleaned. Air agitated solvent baths may not be used.
- (vii) Spills during solvent transfer shall be cleaned immediately. Sorbent material used to clean spills shall then be immediately stored in covered containers.
- (viii) Work area fans shall not blow across the opening of the degreaser unit.
- (ix) The solvent level shall not exceed the fill line.

Maine Administrative School District #61
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2. The remote reservoir cold cleaning machine shall be equipped with a perforated drain with a diameter of not more than six inches. [06-096 CMR 130]
- (20) Lake Region 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 25 DAY OF July, 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.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: January 8, 2013

Date of application acceptance: January 23, 2013

Date filed with the Board of Environmental Protection:

This Order prepared by Edwin Cousins, Bureau of Air Quality

