



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



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**Wells-Ogunquit Community School
District
York County
Wells, Maine
A-826-71-F-N (SM)**

**Departmental
Findings of Fact and Order
Air Emission License
After-the-Fact
Renewal/Amendment**

FINDINGS OF FACT

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

I. REGISTRATION

A. Introduction

The Air Emission License for Wells-Ogunquit Community School District (Wells-Ogunquit CSD) expired on October 2, 2012. Wells-Ogunquit CSD has applied to renew their expired license permitting the operation of emission sources associated with their Elementary School, Junior High School, and High School which are all located on contiguous property.

Wells-Ogunquit CSD has also proposed to replace two of the existing High School boilers with three new boilers, and to install one permanent emergency generator and one portable emergency generator at the High School. The construction is expected to begin in late August 2014 and be completed in August 2016.

The equipment addressed in this license is located at the school district's campus with a mailing address of 1460 Post Road, Wells, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 760-3143

Boilers

<u>Equipment</u>	<u>Maximum Design Heat Input Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate</u>	<u>Fuel Type</u>	<u>Date of Manuf.</u>	<u>Stack #</u>	<u>Changes</u>
Elementary School Boiler #1	3.71	26.5 gal/hr	distillate fuel oil, ASTM D396	2002	4	-
Elementary School Boiler #2	3.71	26.5 gal/hr	distillate fuel oil, ASTM D396	2002	4	-
Junior High School Boiler #1	2.3	16.4 gal/hr	distillate fuel oil, ASTM D396	2004	2	-
Junior High School Boiler #2	2.3	16.4 gal/hr	distillate fuel oil, ASTM D396	2004	2	-
Junior High School Boiler #3	5.67	40.5 gal/hr	distillate fuel oil, ASTM D396	1962	1	-
High School Boiler #1	5.19	37.1 gal/hr	distillate fuel oil, ASTM D396	1975	3	To be replaced
High School Boiler #2	5.19	37.1 gal/hr	distillate fuel oil, ASTM D396	1975	3	To be replaced
High School Boiler #1R	1.45	15.4 gal/hr	LPG or	TBD	3A	New - proposed
		1408 scf/hr	natural gas			
High School Boiler #2R	1.45	15.4 gal/hr	LPG or	TBD	3B	New - proposed
		1408 scf/hr	natural gas			
High School Boiler #3	1.45	15.4 gal/hr	LPG or	TBD	3C	New - proposed
		1408 scf/hr	natural gas			

Table Notes: Date of Manuf. = Date of Manufacture
 ASTM = ASTM International (previously American Society for Testing and Materials)
 LPG = liquid petroleum gas
 TBD = to be determined
 High School Boilers #1R, #2R, and #3 are replacement boilers for High School Boilers #1 and #2 (R denotes replacement unit)
 Heat content of fuels used to determine firing rate: LPG = 0.094 MMBtu/gal,
 Natural gas = 1030 Btu/scf, distillate oil = 0.14 MMBtu/gal

Generators

<u>Equipment</u>	<u>Kilowatt (kW)</u>	<u>Maximum Design Heat Input Capacity (MMBtu/hr)</u>	<u>Firing Rate</u>	<u>Fuel Type</u>	<u>Date of Manuf.</u>
Elementary School Generator	150	1.71	12.46 gal/hr	distillate fuel oil, ASTM D396	2002
Junior High School Generator	60	0.68	4.89 gal/hr	distillate fuel oil, ASTM D396	2002
High School Generator #1	60	0.92	9.6 gal/hr	LPG or	TBD
			895.1 scf/hr	natural gas	
High School Generator #2 (portable)	200	2.19	15.7 gal/hr	distillate fuel oil, ASTM D396	TBD

Table Notes: Same as Boiler table above

C. Application Classification

A complete application was not submitted prior to the expiration date of the previous air emission license, therefore Wells-Ogunquit CSD is considered to be an existing source applying for an after-the-fact renewal. The application also includes replacement of the two High School boilers with three new, smaller units and the addition of two emergency generators at the High School (one stationary and one portable). The incorporation of the modifications in the after-the-fact renewal results in emissions less than the significant emission levels.

The Department has determined the facility is a minor source and the application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended). With the operating hours restriction on the emergency generators, the facility is licensed below the major source thresholds for criteria pollutants and is considered a synthetic minor. Based on emissions from the fuel burning equipment, the facility is licensed below the major source thresholds for hazardous air pollutants (HAP) and is considered an area source of HAP.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as

defined in *Definitions Regulation*, 06-096 CMR 100 (as amended). Separate control requirement categories exist for new and existing equipment.

BPT for an after-the-fact renewal requires an analysis similar to a Best Available Control Technology analysis per 06-096 CMR 115 (as amended).

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. Existing Boilers - Elementary School, Junior High School, and High School

Wells-Ogunquit CSD operates two existing boilers at the Elementary School, three existing boilers at the Junior High School, and two existing boilers at the High School. All seven units fire distillate fuel oil which meets ASTM D396 standards. The Elementary School Boilers #1 and #2 are each rated at 3.71 MMBtu/hr (26.5 gal/hr), were manufactured and installed in 2002, and exhaust through stack #4 at a height of 35 feet above ground level. The Junior High School Boilers #1 and #2 are each rated at 2.3 MMBtu/hr (16.4 gal/hr), were manufactured in 2004 and installed in 2005, and exhaust through stack #2 at a height of 35 feet above ground level. The Junior High School Boiler #3 is rated at 5.67 MMBtu/hr (40.5 gal/hr), was manufactured and installed in 1962, and exhausts through stack #1 at a height of 29 feet above ground level. The High School Boilers #1 and #2 are each 5.19 MMBtu/hr (37.1 gal/hr), were manufactured and installed in 1975, and exhaust through stack #3 at a height of 29 feet above ground level. The High School Boilers and stack #3 are proposed to be replaced.

Due to the size of each unit, the boilers 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.

1. BACT Findings

The BACT emission limits for the boilers were based on the following:

- PM/PM₁₀ – 0.08 lb/MMBtu based on previous BACT
- SO₂ – based on firing ASTM D396 compliant distillate fuel oil (currently 0.5% sulfur by weight, 0.5 lb/MMBtu)
- NO_x – 0.45 lb/MMBtu based on previous BACT comparison to similar sources
- CO – 5 lb/1000 gal based on AP-42, Table 1.3-1, dated 5/10 (0.0357 lb/MMBtu)
- VOC – 0.34 lb/1000 gal based on AP-42, Table 1.3-3, dated 5/10 (0.0024 lb/MMBtu)

Opacity – 06-096 CMR 101

The BACT emission limits for the boilers are the following:

Unit	Pollutant	lb/MMBtu
Elementary School Boiler #1	PM	0.08
Elementary School Boiler #2	PM	0.08
Junior High School Boiler #3	PM	0.08
High School Boiler #1	PM	0.08
High School 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)
Elementary School Boiler #1 (3.71 MMBtu/hr)	0.3	0.3	1.9	1.7	0.13	0.01
Elementary School Boiler #2 (3.71 MMBtu/hr)	0.3	0.3	1.9	1.7	0.13	0.01
Junior High School Boiler #1 (2.3 MMBtu/hr)	0.2	0.2	1.2	1.0	0.1	0.01
Junior High School Boiler #2 (2.3 MMBtu/hr)	0.2	0.2	1.2	1.0	0.1	0.01
Junior High School Boiler #3 (5.67 MMBtu/hr)	0.4	0.4	2.9	2.5	0.20	0.01
High School Boiler #1 (5.19 MMBtu/hr)	0.4	0.4	2.6	2.3	0.2	0.01
High School Boiler #2 (5.19 MMBtu/hr)	0.4	0.4	2.6	2.3	0.2	0.01

Visible emissions from each of the distillate oil-fired boilers 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.

Wells-Ogunquit CSD shall be limited to 450,000 gallons/yr of distillate fuel oil based on a calendar year.

Prior to July 1, 2016, or by the date otherwise stated in 38 MRSA §603-A(2)(A)(3), the distillate fuel fired at the facility 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 July 1, 2016, or on the date specified in the statute, the facility shall fire distillate fuel 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 distillate fuel 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.

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 type of fuel fired.

3. 40 CFR Part 63, Subpart JJJJJ

Elementary School Boilers #1 and #2, Junior High School Boilers #1, #2, and #3, and existing High School Boilers #1 and #2 are 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.

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 Wells-Ogunquit CSD 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 was 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 was to be implemented to include the initial tune-up of applicable boilers no later than March 21, 2014. [40 CFR Part 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
New or Existing Oil, Biomass and Coal fired boilers that are not designated as "Boilers with less frequent tune up requirements" listed below	Every 2 years
<i>New and Existing Oil, Biomass, and Coal fired Boilers with less frequent tune up requirements</i>	
Seasonal (see definition §63.11237)	Every 5 years
Limited use (see definition §63.11237)	Every 5 years
With a heat input capacity of <5MMBtu/hr	Every 5 years
Boiler with oxygen trim system which maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune up	Every 5 years

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

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)]
 - (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 systems, 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 systems, 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 was to be submitted to EPA no later than July 19, 2014. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(b)]

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.

EPA requires submission of Notification of Compliance Status reports for tune-ups and energy assessments through their electronic reporting system. [63.1125(a)(4)(vi)]

C. Replacement Boilers - High School Boilers #1R, #2R, #3

Wells-Ogunquit CSD has proposed to replace the existing distillate fuel oil fired High School Boilers #1 and #2 (5.19 MMBtu/hr each) with three units having heat input

capacity ratings of 1.45 MMBtu/hr each, expected to be installed in 2015/2016. The new boilers will be designated as High School Boilers #1R, #2R, and #3, with the 'R' denoting replacement to distinguish them in the future from the current units. The new boilers will fire either natural gas or LPG (propane). Proposal bid documents have been put out for three various fuel source scenarios, including natural gas, on-site underground propane storage tanks (six 1000 gallon tanks), and a hybrid geothermal system with underground propane storage tanks (only two 1000 gallon tanks). Wells-Ogunquit will be selecting one of the fuel alternatives. This license addresses the use of either natural gas or propane as fuels in the new boilers. The proposed High School units will exhaust through new stacks #3A, #3B, and #3C, each at a height 25 feet above ground level.

Due to the size of the proposed boilers, the units 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.

Due to the firing of gaseous fuel in the proposed boilers, the units are not subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* (40 CFR Part 63, Subpart JJJJJ).

BACT Findings

The BACT emission limits for the proposed High School boilers were based on the following:

Natural Gas

PM/PM ₁₀	–	0.05 lb/MMBtu based on 06-096 CMR 115, BACT
SO ₂	–	0.6 lb/MMscf based on AP-42, Table 1.4-2, dated 7/98
NO _x	–	100 lb/MMscf based on AP-42, Table 1.4-1, dated 7/98
CO	–	84 lb/MMscf based on AP-42, Table 1.4-1, dated 7/98
VOC	–	5.5 lb/MMscf based on AP-42, Table 1.4-2, dated 7/98
Opacity	–	06-096 CMR 101

LPG

PM/PM ₁₀	–	0.05 lb/MMBtu based on 06-096 CMR 115, BACT
SO ₂	–	1.5 lb/1000 gal based on AP-42 Table 1.5-1, dated 7/08, factor of 0.01S where S is sulfur content expressed on gr/100scf (S used was 15 gr/100scf)
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	–	1.0 lb/1000 gal based on AP-42, Table 1.5-1, dated 7/08
Opacity	–	06-096 CMR 101 or previous BACT

The BACT emission limits for each of the High School Boilers #1R, #2R, and #3 are the following if the unit(s) is natural gas fired:

Natural Gas – each boiler

PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
0.07	0.07	0.001	0.14	0.12	0.007

The BACT emission limits for each of the High School Boilers #1R, #2R, and #3 are the following if the unit(s) is LPG fired:

LPG – each boiler

PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
0.07	0.07	0.02	0.20	0.12	0.02

Visible emissions from each boiler firing natural gas or LPG shall not exceed 10% 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.

Wells-Ogunquit CSD will not have a fuel limit for natural gas or LPG due to the relatively low potential annual emissions from High School Boilers #1R, #2R, and #3 without any fuel restrictions.

D. Existing Emergency Generators – Elementary School and Junior High School Generators

Wells-Ogunquit CSD operates two existing distillate fuel oil fired emergency generators. The emergency generator at the Elementary School is rated at 1.71 MMBtu/hr input (12.46 gal/hr), 150 kW output, and was manufactured and installed in 2002. The emergency generator at the Junior High School is rated at 0.68 MMBtu/hr input (4.89 gal/hr), 60 kW output, and was manufactured and installed in 2002.

1. BACT Findings

The BACT emission limits for the existing generators are based on the following:

- PM/PM₁₀ - 0.31 lb/MMBtu based on AP-42 Table 1.3-1 dated 5/10
- SO₂ - combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
- NO_x - 4.41 lb/MMBtu based on AP-42 Table 1.3-1 dated 5/10
- CO - 0.95 lb/MMBtu based on AP-42 Table 1.3-1 dated 5/10
- VOC - 0.36 lb/MMBtu based on AP-42 Table 1.3-1 dated 5/10
- Opacity - 06-096 CMR 101

The BACT emission limits for the generators 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)
Elementary School Generator (1.71 MMBtu/hr) <i>Distillate fuel oil</i>	0.53	0.53	0.003	7.50	1.62	0.61
Junior High School Generator (0.68 MMBtu/hr) <i>Distillate fuel oil</i>	0.21	0.21	0.001	3.00	0.65	0.24

Visible emissions from each of the distillate fuel-fired emergency generators shall not exceed 20% opacity on a 6-minute block average, except for no more than two (2) six (6) minute block averages in a 3-hour period.

Each of the emergency generators shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. There is no limit on emergency operation. Each emergency generator shall be equipped with a non-resettable hour-meter to record operating time. To demonstrate compliance with the operating hours limit, Wells-Ogunquit CSD shall keep records of the total hours of operation and the hours of emergency operation for each unit.

Emergency generators are only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. Emergency generators are 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 generators listed above. The

units are considered existing, emergency stationary reciprocating internal combustion engines at an area HAP source. However, they are considered exempt from the requirements of Subpart ZZZZ since they are categorized as a residential, commercial, or institutional emergency engine and they do not operate or are 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 emergency generators such that each 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(s) to be subject to 40 CFR Part 63, Subpart ZZZZ, and require compliance with all applicable requirements.

E. Proposed Emergency Generators – High School Generators #1 and #2

At the high school, Wells-Ogunquit CSD is proposing two new emergency generators. High School Generator #1 will fire either LPG or natural gas, will be rated at 0.92 MMBtu/hr input (9.6 gal/hr or 895.1 scf/hr) and 60 kW output, and will be in a permanent location. High School Generator #2 will fire distillate fuel oil, will be rated at 2.19 MMBtu/hr input (15.7 gal/hr) and 200 kW output, is considered portable, and has been sized for the calculated load to be used only in the event of a long term power outage.

1. BACT Findings

The BACT emission limits for the generators are based on the following:

Natural Gas or LPG

There are no published AP-42 factors for generators firing LPG, so natural gas factors will be used for both fuels. The factors for 4-stroke lean-burn units were used as worst case.

PM/PM ₁₀	- 0.00991 lb/MMBtu from AP-42 Table 3.2-2 dated 7/00
SO ₂	- 0.000588 lb/MMBtu from AP-42 Table 3.2-2 dated 7/00
NO _x	- 4.08 lb/MMBtu from AP-42 Table 3.2-2 dated 7/00
CO	- 0.557 lb/MMBtu from AP-42 Table 3.2-2 dated 7/00
VOC	- 0.118 lb/MMBtu from AP-42 Table 3.2-2 dated 7/00
Opacity	- 06-096 CMR 101

Distillate Fuel Oil:

- PM/PM₁₀ - 0.31 lb/MMBtu based on AP-42 Table 1.3-1 dated 5/10
- SO₂ - combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
- NO_x - 4.41 lb/MMBtu based on AP-42 Table 1.3-1 dated 5/10
- CO - 0.95 lb/MMBtu based on AP-42 Table 1.3-1 dated 5/10
- VOC - 0.36 lb/MMBtu based on AP-42 Table 1.3-1 dated 5/10
- Opacity - 06-096 CMR 101

The BACT emission limits for the generators 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)
High School Generator #1 (0.92 MMBtu/hr) LPG or natural gas	0.009	0.009	0.005	3.77	0.51	0.11
High School Generator #2 (2.19 MMBtu/hr) Distillate Fuel Oil	0.26	0.26	0.003	9.64	2.08	0.79

Visible emissions from High School Generator #1 shall not exceed 10% opacity on a 6-minute block average, except for no more than two (2) six (6) minute block averages in a 3-hour period.

Visible emissions from High School Generator #2 shall not exceed 20% opacity on a 6-minute block average, except for no more than two (2) six (6) minute block averages in a 3-hour period.

2. 40 CFR Part 60, Subpart JJJJ - High School Generator #1

The federal regulation 40 CFR Part 60, Subpart JJJJ, *Standards of Performance for Spark Ignition Internal Combustion Engines (SI ICE)* is applicable to High School Generator #1 since the unit will be ordered after June 12, 2006 and manufactured after January 1, 2009. By meeting the requirements of Subpart JJJJ, the unit also meets the requirements found in the *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 CFR Part 63, Subpart ZZZZ.

a. Emergency Definition:

Emergency stationary ICE means any stationary reciprocating internal combustion engine that meets all of the following criteria:

- (1) The stationary ICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc. There is no time limit on the use of emergency stationary ICE in emergency situations
- (2) Paragraph (1) above notwithstanding, the emergency stationary ICE may be operated for any combination of the purposes specified below for a maximum of 100 hours per calendar year:
 - (i) Maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.
 - (ii) Emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.
 - (iii) Periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.
- (3) Paragraphs (1) and (2) above notwithstanding, emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. These 50 hours are counted as part of the 100 hours per calendar year for maintenance checks and readiness testing, emergency demand response, and periods of voltage deviation or low frequency, as provided in paragraph (2) above.

The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as

part of a financial arrangement with another entity, except if the following conditions are met:

- (i) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.
- (ii) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
- (iii) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
- (iv) The power is provided only to the facility itself or to support the local transmission and distribution system.
- (v) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[40 CFR §60.4243(d) and §60.4248]

b. 40 CFR Part 60, Subpart JJJJ Requirements:

(1) Manufacturer Certification Requirement

The generator shall be certified by the manufacturer as meeting the emission standards for new nonroad spark ignition engines found in 40 CFR Part 60, Subpart JJJJ, Table 1 or compliance with the emission standards shall be demonstrated using the applicable methods required of the owner/operator in 40 CFR Part 60, Subpart JJJJ.

Wells-Ogunquit has submitted information on a proposed Olympian™ model G60LG2 unit for use as High School Generator #1. It is a 2014 EPA certified gas industrial generator in the EPA engine family of EGNXB06.82NN with an EPA certification number of EGNXB06.82NN-001 for natural gas and in the EPA engine family of EGNXB06.82NL with an EPA certification number of EGNXB06.82NN-002 for LPG.

(2) Non-Resettable Hour Meter Requirement

A non-resettable hour meter shall be installed and operated on the generator.
[40 CFR §60.4237]

(3) Operation and Maintenance Requirement

The generator shall be operated and maintained according to the manufacturer's written instructions or procedures developed by facility that are approved by the engine manufacturer. Wells-Ogunquit CSD may only change those settings that are permitted by the manufacturer. [40 CFR §60.4243]

(4) Annual Time Limit for Maintenance and Testing

The generator shall be limited to 100 hours/year for maintenance and testing. The emergency engine may operate up to 50 hours per year in non-emergency situations, but those 50 hours are included in the 100 hours allowed for maintenance and testing. The 50 hours for non-emergency use cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 CFR §60.4243(d)]

(5) Recordkeeping

Wells-Ogunquit CSD shall keep records that include maintenance conducted on the engine and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the hours spent for emergency operation, including what classified the operation as emergency and how many hours spent for non-emergency. If the generator is operated during a period of demand response or deviation from standard voltage or frequency, or to supply power during a non-emergency situation as part of a financial arrangement with another entity as specified in §60.4243(d)(3)(i), Wells-Ogunquit CSD shall keep records of the notification of the emergency situation, and the date, start time, and end time of generator operation for these purposes. [40 CFR §60.4245(b)]

[40 CFR §60.4245(e)]

3. 40 CFR Part 60, Subpart IIII – High School Generator #2

The federal regulation 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE)* is applicable to High School Generator #2 since the unit will be ordered after July 11, 2005 and manufactured after April 1, 2006. By meeting the requirements of Subpart IIII, the unit also meets the requirements found in the *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 CFR Part 63, Subpart ZZZZ.

a. Emergency Definition:

Emergency stationary ICE means any stationary reciprocating internal combustion engine that meets all of the following criteria:

- (1) The stationary ICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc. There is no time limit on the use of emergency stationary ICE in emergency situations.
- (2) Paragraph (1) above notwithstanding, the emergency stationary ICE may be operated for any combination of the purposes specified below for a maximum of 100 hours per calendar year:
 - (i) Maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.
 - (ii) Emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.
 - (iii) Periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.
- (3) Paragraphs (1) and (2) above notwithstanding, emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. These 50 hours are counted as part of the 100 hours per calendar year for maintenance checks and readiness testing, emergency demand response, and periods of voltage deviation or low frequency, as provided in paragraph (2) above.

The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as

part of a financial arrangement with another entity, except if the following conditions are met:

- (ii) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.
- (iii) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
- (iv) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
- (v) The power is provided only to the facility itself or to support the local transmission and distribution system.
- (vi) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[40 CFR §60.4211(f) and §60.4219]

b. 40 CFR Part 60, Subpart IIII Requirements:

(1) Manufacturer Certification Requirement

The generator shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in 40 CFR §60.4202. [40 CFR §60.4205(b)]

(2) Ultra-Low Sulfur Fuel Requirement

The fuel fired in the generator shall not exceed 15 ppm sulfur (0.0015% sulfur), except that any existing fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. [40 CFR §60.4207(b)]

(3) Non-Resettable Hour Meter Requirement

A non-resettable hour meter shall be installed and operated on the generator. [40 CFR §60.4209(a)]

(4) Operation and Maintenance Requirements

The generator shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by facility that are approved by the engine manufacturer. Wells-Ogunquit CSD may only change those emission-related settings that are permitted by the manufacturer. [40 CFR §60.4211(a)]

(5) Annual Time Limit for Maintenance and Testing

The generator shall be limited to 100 hours/year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity unless the conditions in §60.4211(f)(3)(i) are met). [40 CFR §60.4211(f)]

(6) Initial Notification Requirement

No initial notification is required for emergency engines. [40 CFR §60.4214(b)]

(7) Recordkeeping

Wells-Ogunquit CSD shall keep records that include maintenance conducted on the engine(s) and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the hours spent for emergency operation, including what classified the operation as emergency and how many hours spent for non-emergency. If the generator is operated during a period of demand response or deviation from standard voltage or frequency, or to supply power during a non-emergency situation as part of a financial arrangement with another entity as specified in §60.4211(f)(3)(i), Wells-Ogunquit CSD shall keep records of the notification of the emergency situation, and the date, start time, and end time of generator operation for these purposes. [40 CFR §60.4214(b)]

(8) Annual Reporting Requirements for Demand Response Availability Over 15 Hours Per Year (for generators greater than 100 brake hp)

If Wells-Ogunquit CSD operates or is 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 §60.4211(f)(3)(i), the facility shall submit an annual report containing the information in §60.4214(d)(1)(i) through (vii). The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year. The annual report must be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form is not available in CEDRI at the time that the report is due, the written report must be submitted to the following address:

Director, Office of Ecosystem Protection
 U.S. Environmental Protection Agency
 5 Post Office Square, Suite 100
 Boston, MA 02109-3912

[40 CFR §60.4214(d)]

F. Fugitive Emissions

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed an opacity of 20%, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20% in any one (1) hour.

G. Annual Emissions

1. Total Annual Emissions

Wells-Ogunquit CSD shall be restricted to the following annual emissions, based on a calendar year. The tons per year limits were calculated based on 450,000 gallons/year distillate fuel oil in the existing boilers, use of either LPG or natural gas in the proposed High School boilers, and 100 hours/year for each generator:

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
Existing Boilers – oil fired	2.52	2.52	15.75	14.18	1.12	0.08
High School Proposed Boilers – natural gas	0.95	0.95	*	*	1.56	*
LPG	*	*	0.29	0.63	*	0.20
Elementary School Gen	0.03	0.03	0.0001	0.38	0.08	0.03
Junior High School Gen	0.01	0.01	0.00005	0.15	0.03	0.01
High School Gen #1	0.0005	0.0005	0.00003	0.19	0.03	0.005
High School Gen #2	0.01	0.01	0.0002	0.48	0.10	0.04
Total TPY	3.5	3.5	16.0	16.0	2.9	0.4

* worst case scenario used to calculate annual emissions (either natural gas or propane).

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, Wells-Ogunquit CSD 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 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 A-826-71-F-N 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) **Existing Boilers**
(Elementary School Boilers #1 and #2, Junior High School Boilers #1, #2, and #3, and High School Boilers #1 and #2)
- A. Fuel
1. Total fuel use for the existing boilers listed above shall not exceed 450,000 gal/yr of distillate fuel, based on a calendar year basis. [06-096 CMR 115, BACT]
 2. Prior to July 1, 2016 or the date specified in 38 MRSA §603-A(2)(A)(3), the distillate fuel fired in the boiler shall be ASTM D396 compliant (max. sulfur content of 0.5% by weight). [06-096 CMR 115, BACT]

3. Beginning July 1, 2016 or on the date specified in 38 MRSA §603-A(2)(A)(3), the facility shall fire distillate fuel with a maximum sulfur content limit of 0.005% by weight (50 ppm). [38 MRSA §603-A(2)(A)(3)]
4. Beginning July 1, 2018 or on the date specified in 38 MRSA §603-A(2)(A)(3), the facility shall fire distillate fuel 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 monthly and calendar year basis. [06-096 CMR 115, BACT]

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

Unit	Pollutant	lb/MMBtu
Elementary School Boiler #1	PM	0.08
Elementary School Boiler #2	PM	0.08
Junior High School Boiler #3	PM	0.08
High School Boiler #1	PM	0.08
High School Boiler #2	PM	0.08

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

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Elementary School Boiler #1 (3.71 MMBtu/hr)	0.3	0.3	1.9	1.7	0.13	0.01
Elementary School Boiler #2 (3.71 MMBtu/hr)	0.3	0.3	1.9	1.7	0.13	0.01
Junior High School Boiler #1 (2.3 MMBtu/hr)	0.2	0.2	1.2	1.0	0.1	0.01
Junior High School Boiler #2 (2.3 MMBtu/hr)	0.2	0.2	1.2	1.0	0.1	0.01
Junior High School Boiler #3 (5.67 MMBtu/hr)	0.4	0.4	2.9	2.5	0.20	0.01
High School Boiler #1 (5.19 MMBtu/hr)	0.4	0.4	2.6	2.3	0.2	0.01
High School Boiler #2 (5.19 MMBtu/hr)	0.4	0.4	2.6	2.3	0.2	0.01

D. Visible emissions from the existing distillate oil-fired boilers 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 101]

E. Boiler MACT (40 CFR Part 63, Subpart JJJJJ) Requirements for the Existing Distillate Oil-Fired Boilers [incorporated under 06-096 CMR 115, BACT]

1. An Initial Notification submittal to EPA was due no later than January 20, 2014. [40 CFR Part 63.11225(a)(2)]
2. The facility shall have implemented a boiler tune-up program to include the initial tune-up of the applicable boilers no later than March 21, 2014 (for existing boilers). [40 CFR Part 63.11223]
 - (a) Each tune-up shall be conducted at a frequency specified by the rule and based on the size, age, and operations of the boiler. See chart below:

Boiler Category	Tune-Up Frequency
New or Existing Oil, Biomass and Coal fired boilers that are not designated as "Boilers with less frequent tune up requirements" listed below	Every 2 years
<i>New and Existing Oil, Biomass, and Coal fired Boilers with less frequent tune up requirements</i>	
Seasonal (see definition §63.11237)	Every 5 years
Limited use (see definition §63.11237)	Every 5 years
With a heat input capacity of <5MMBtu/hr	Every 5 years
Boiler with oxygen trim system which maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune up	Every 5 years

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

- (b) 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)]

3. 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; 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 systems, seasonal boilers, and limited use boilers. [40 CFR Part 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 CFR Part 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; 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 systems, seasonal boilers, and limited use boilers. [40 CFR Part 63.11223(b)(3)]
 - (d) Optimize total emissions of CO, consistent with manufacturer's specifications. [40 CFR Part 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 CFR Part 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 CFR Part 63.11223(b)(7)]
4. After conducting the initial boiler tune-up, a Notification of Compliance Status was to have been submitted to EPA no later than July 19, 2014. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(b)]
5. 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.

(17) **New Boilers**

(High School Boilers #1R, #2R, and #3)

A. Fuel

The fuel fired in the proposed High School Boilers shall be either natural gas or LPG (propane). [06-096 CMR 115, BACT]

B. Emissions from each of the High School Boilers #1R, #2R, and #3 shall not exceed the following if firing natural gas [06-096 CMR 115, BACT]:

PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
0.07	0.07	0.001	0.14	0.12	0.007

C. Emissions from each of the High School Boiler #1R, #2R, and #3 shall not exceed the following if firing LPG [06-096 CMR 115, BACT]:

PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
0.07	0.07	0.02	0.20	0.12	0.02

D. Visible Emissions

Visible emissions from each boiler firing natural gas or LPG shall not exceed 10% 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. [06-096 CMR 101]

(18) **Existing Emergency Generators**

(Elementary School and Junior High School Emergency Generators)

A. Each of the emergency generators shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 CMR 115, BACT]

B. Wells-Ogunquit CSD shall keep records that include maintenance conducted on the engines and the hours of operation of each engine recorded through the non-resettable hour meter. Documentation shall include the hours spent for emergency operation, including what classified the operation as emergency and how many hours spent for non-emergency. [06-096 CMR 115, BACT]

- C. If the generators are operated during a period of demand response or deviation from standard voltage or frequency, or to supply power during a non-emergency situation as part of a financial arrangement with another entity, Wells-Ogunquit CSD shall keep records of the notification of the emergency situation, and the date, start time, and end time of generator operation for these purposes. [06-096 CMR 115, BACT]
- D. The fuel sulfur content for the Elementary School and Junior High School Generators shall be limited to 0.0015% sulfur by weight. Compliance shall be demonstrated by fuel records from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [06-096 CMR 115, BACT]
- E. Emissions shall not exceed the following [06-096 CMR 115, BACT]:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Elementary School Generator (1.71 MMBtu/hr) <i>Distillate fuel oil</i>	0.53	0.53	0.003	7.50	1.62	0.61
Junior High School Generator (0.68 MMBtu/hr) <i>Distillate fuel oil</i>	0.21	0.21	0.001	3.00	0.65	0.24

F. Visible Emissions

Visible emissions from each of the distillate fuel-fired generators shall not exceed 20% opacity on a 6 minute block average, except for no more than two (2) six (6) minute block averages in a 3 hour period. [06-096 CMR 101]

G. Emergency generators are only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. Emergency generators are 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. [06-096 CMR 115, BACT]

(19) **Proposed Emergency Generators**
(High School Generators #1 and #2)

A. Each of the emergency generators shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 CMR 115, BACT]

B. Emissions shall not exceed the following:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
High School Generator #1 (0.92 MMBtu/hr) LPG or natural gas	0.009	0.009	0.005	3.77	0.51	0.11
High School Generator #2 (2.19 MMBtu/hr) Distillate Fuel Oil	0.26	0.26	0.003	9.64	2.08	0.79

C. Visible Emissions

1. Visible emissions from High School Generator #1 shall not exceed 10% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 115, BACT]
2. Visible emissions from High School Generator #2 shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 101]

D. High School Generator #1 shall meet the applicable requirements of 40 CFR Part 60, Subpart JJJJ, including the following:

1. **Manufacturer Certification**
The generators shall be certified by the manufacturer as meeting the emission standards for new nonroad spark ignition engines found in 40 CFR Part 60, Subpart JJJJ, Table 1 or compliance with the emission standards shall be demonstrated using the applicable methods required of the owner/operator in 40 CFR Part 60, Subpart JJJJ.
2. **Non-Resettable Hour Meter**
A non-resettable hour meter shall be installed and operated on the generator. [40 CFR §60.4237 and 06-096 CMR 115, BACT]
3. **Annual Time Limit for Maintenance and Testing**
 - a. The generator shall be limited to 100 hours/year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity unless the conditions in

§60.4243(d)(3)(i) are met). The limits are based on a calendar year. Compliance shall be demonstrated by a written log of all generator operating hours. [40 CFR §60.4243(d) and 06-096 CMR 115, BACT]

- b. Wells-Ogunquit CSD shall keep records that include maintenance conducted on the generator and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the hours spent for emergency operation, including what classified the operation as emergency and how many hours spent for non-emergency. If the generator is operated during a period of demand response or deviation from standard voltage or frequency, or to supply power during a non-emergency situation as part of a financial arrangement with another entity as specified in §60.4243(d)(3)(i), Wells-Ogunquit CSD shall keep records of the notification of the emergency situation, and the date, start time, and end time of generator operation for these purposes.

4. Operation and Maintenance

The generator shall be operated and maintained according to the manufacturer's written instructions or procedures developed by Wells-Ogunquit CSD that are approved by the engine manufacturer. Wells-Ogunquit CSD may only change those settings that are permitted by the manufacturer. [40 CFR §60.4243]

E. High School Generator #2 shall meet the applicable requirements of 40 CFR Part 60, Subpart IIII, including the following:

1. Manufacturer Certification

The generator shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in §60.4202. [40 CFR §60.4205(b)]

2. Ultra-Low Sulfur Fuel

The fuel fired in the generator shall not exceed 15 ppm sulfur (0.0015% sulfur), except that any existing fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. Compliance with the fuel sulfur content limit shall be based on fuel records from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [40 CFR §60.4207(b) and 06-096 CMR 115, BACT]

3. Non-Resettable Hour Meter

A non-resettable hour meter shall be installed and operated on the generator. [40 CFR §60.4209(a)]

4. Annual Time Limit for Maintenance and Testing
 - a. The generator shall be limited to 100 hours/year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity unless the conditions in §60.4211(f)(3)(i) are met). These limits are based on a calendar year. Compliance shall be demonstrated by a written log of all generator operating hours. [40 CFR §60.4211(f) and 06-096 CMR 115]
 - b. Wells-Ogunquit CSD shall keep records that include maintenance conducted on the generator and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the hours spent for emergency operation, including what classified the operation as emergency and how many hours spent for non-emergency. If the generator is operated during a period of demand response or deviation from standard voltage or frequency, or to supply power during a non-emergency situation as part of a financial arrangement with another entity as specified in §60.4211(f)(3)(i), Wells-Ogunquit CSD shall keep records of the notification of the emergency situation, and the date, start time, and end time of generator operation for these purposes.
5. Operation and Maintenance

The generator shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by Wells-Ogunquit CSD that are approved by the engine manufacturer. Wells-Ogunquit CSD may only change those emission-related settings that are permitted by the manufacturer. [40 CFR §60.4211(a)]
6. Annual Reporting For Demand Response Availability Over 15 Hours Per Year (for generators greater than 100 brake hp)

If Wells-Ogunquit CSD operates or is 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 §60.4211(f)(3)(i), the facility shall submit an annual report containing the information in §60.4214(d)(1)(i) through (vii). The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year. The annual report must be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data

Wells-Ogunquit Community School
District
York County
Wells, Maine
A-826-71-F-N (SM)

33

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

Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form is not available in CEDRI at the time that the report is due, the written report must be submitted to the following address:

Director, Office of Ecosystem Protection
U.S. Environmental Protection Agency
5 Post Office Square, Suite 100
Boston, MA 02109-3912

[40 CFR §60.4214(d)]

(20) **Fugitive Emissions**

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed an opacity of 20%, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20% in any one (1) hour. [06-096 CMR 101]

- (21) Wells-Ogunquit CSD 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 31 DAY OF July, 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:


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: June 10, 2014

Date of application acceptance: June 10, 2014

Date filed with the Board of Environmental Protection:

This Order prepared by Kathleen E. Tarbuck, Bureau of Air Quality.

