



DEPARTMENT ORDER

Scarborough Public Schools
Cumberland County
Scarborough, Maine
A-897-71-G-N/A

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

FINDINGS OF FACT

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

I. REGISTRATION

A. Introduction

The Air Emission License for Scarborough Public Schools (Scarborough) was issued with an expiration date of March 10, 2025. Scarborough applied after that date to renew their license for the operation of emission sources associated with their educational facility.

Scarborough has requested an after-the-fact amendment to their license in order to add a new emergency generator to the Middle School Campus (MS Caterpillar Generator), and to add a new boiler to the High School Campus (Boiler #7).

The equipment addressed in this license is located at 11 Municipal Drive, Scarborough, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Boilers

Location	Equipment	Max. Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type	Date of Manuf.	Date of Install.	Stack #
Middle School	Boiler #1	1.83	1,777 scf/hr; 12.6 gal/hr	Natural Gas; Distillate Fuel	1996	1996	1
Middle School	Boiler #2	1.83	1,777 scf/hr; 12.6 gal/hr	Natural Gas; Distillate Fuel	1996	1996	1
Wentworth School	Boiler #3	1.66	1,611 scf/hr	Natural Gas	2012	2014	1
Wentworth School	Boiler #4	1.66	1,611 scf/hr	Natural Gas	2012	2014	2

Location	Equipment	Max. Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type	Date of Manuf.	Date of Install.	Stack #
High School	Boiler #5	7.0	6,796 scf/hr; 50.41 gal/hr	Natural Gas; Distillate Fuel	2004	2004	3
High School	Boiler #6	7.0	6,796 scf/hr; 50.41 gal/hr	Natural Gas; Distillate Fuel	2004	2004	4
High School	Boiler #7*	2.0	1,961 scf/hr	Natural Gas	2004	2004	2

* New to license

Stationary Engines

Equipment	Max. Input Capacity (MMBtu/hr)	Rated Output Capacity (kW)	Fuel Type	Firing Rate (gal/hr)	Date of Manuf.	Date of Install.
HS Caterpillar Generator	4.77	500	Distillate Fuel	34.8	1993	1993
WS Caterpillar Generator	4.77	500	Distillate Fuel	34.8	2013	2014
MS Caterpillar Generator *	4.77	500	Distillate Fuel	34.8	2025	2025

* New to license

C. Definitions

Distillate Fuel means the following:

- Fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials (ASTM) in ASTM D396;
- Diesel fuel oil numbers 1 or 2, as defined in ASTM D975;
- Kerosene, as defined in ASTM D3699;
- Biodiesel, as defined in ASTM D6751; or
- Biodiesel blends, as defined in ASTM D7467.

Records or Logs mean either hardcopy or electronic records.

D. Application Classification

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

The previous air emission license for Scarborough expired on March 10, 2025. A complete application was not submitted prior to the expiration date; therefore, Scarborough is considered to be an existing source applying for an after-the-fact renewal. 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 Code of Maine Rules (C.M.R.) ch. 115.

E. Facility Classification

With the operating hours restriction on the generators, the facility is licensed as follows:

- As a synthetic minor source of air emissions for criteria pollutants, because Scarborough is subject to license restrictions that keep facility emissions below major source thresholds for NO_x; and
- As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for HAP.

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

A. Introduction

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

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

BPT for an after-the-fact renewal requires an analysis similar to a Best Available Control Technology (BACT) analysis pursuant to 06-096 C.M.R. ch. 115.

B. Boilers #1 - #7

Scarborough operates Boilers #1-#7 for building and water heating. The boilers have rated capacities of 1.83 MMBtu/hr, 1.83 MMBtu/hr, 1.66 MMBtu/hr, 1.66 MMBtu/hr, 7.0 MMBtu/hr, 7.0 MMBtu/hr, and 2.0 MMBtu/hr, respectively. Boilers #1, #2, #5, and #6 fire either distillate fuel or natural gas, and Boilers #3, #4, and #7 fire only natural gas. The boilers were installed in 1996, 1996, 2014, 2014, 2004, 2004, and 2004, respectively. Boilers #1 and #2 exhaust through Stack 1; Boilers #3, #4, and #7 exhaust through Stack 2; Boiler #5 exhausts through Stack 3; and Boiler #6 exhausts through Stack 4.

1. BACT and BPT Findings

Note: Although Boiler #7 is already installed and in operation at the facility, it is now being added to the facility's air emission license. Therefore, BACT in the following sections is for Boiler #7, and BPT is for Boilers #1 - #6.

Following is a BACT analysis for control of emissions from Boiler #7.

a. Particulate Matter (PM, PM₁₀, PM_{2.5})

Scarborough has proposed to burn only low-ash content fuel (natural gas) in Boilers #7 and to optimize combustion conditions using an oxygen trim system. An oxygen (O₂) trim system monitors the O₂ content in the exhaust gas and automatically adjusts the fuel valve or air damper to optimize the air-to-fuel ratio. Additional add-on pollution controls are not economically feasible.

BACT for PM/PM₁₀/PM_{2.5} emissions from Boiler #7 is firing natural gas, the use of an oxygen trim system, and the emission limits listed in the tables below.

b. Sulfur Dioxide (SO₂)

Scarborough has proposed to fire only natural gas in Boiler #7. The use of this fuel results in minimal emissions of SO₂, and additional add-on pollution controls are not economically feasible.

BACT for SO₂ emissions from Boiler #7 is the use of natural gas, the emission limits listed in the tables below.

c. Nitrogen Oxides (NO_x)

Scarborough considered several control strategies for the control of NO_x including Selective Catalytic Reduction (SCR), Selective Non-Catalytic Reduction (SNCR), water/steam injection, flue gas recirculation (FGR), and use of oxygen trim systems.

Both SCR and SNCR are technically feasible control technologies for minimizing NO_x. Both methods include injection of a NO_x reducing agent, typically ammonia or urea, into the boiler combustion gases, where the reagent reacts with NO_x to form nitrogen and water. Each technology is effective within a specific temperature range, 500 – 1,200 °F for SCR and 1,400 – 1,600 °F for SNCR. However, both SCR and SNCR have the negative environmental impact of emissions of unreacted ammonia. In addition, due to the initial capital cost and the annual operating costs, these systems are typically only considered cost-effective for units larger than Boiler #7.

Water/steam injection and FGR can attain similar NO_x reduction efficiencies through lowering burner flame temperature and thereby reducing thermal NO_x formation. However, both control strategies reduce the boiler's fuel efficiency.

The use of FGR on Boiler #7 as well as an oxygen trim system has been determined to be feasible and has been selected as part of the BACT strategy.

BACT for NO_x emissions from Boiler #7 is the use of FGR and an oxygen trim system and the emission limits listed in the tables below.

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

Scarborough considered several control strategies for the control of CO and VOC including oxidation catalysts, thermal oxidizers, and use of an oxygen trim system.

Oxidation catalysts and thermal oxidizers both have high capital, maintenance, and operational costs considering the size of the boiler in question. These controls were determined to be economically infeasible.

The use of an oxygen trim system has been determined to be feasible and has been selected as part of the BACT strategy for Boiler #7.

BACT for CO and VOC emissions from Boiler #7 is the use of an oxygen trim system and the emission limits listed in the tables below.

e. Emission Limits

The BACT and BPT emission limits for Boilers #1-#7 were based on the following:

Distillate Fuel

- PM – 0.08 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
- SO₂ – based on firing distillate fuel with a maximum sulfur content of 0.0015% by weight
- NO_x – 20 lb/MMBtu based on AP-42 Table 1.3-1 dated 5/10
- CO – 5 lb/MMBtu based on AP-42 Table 1.3-1 dated 5/10
- VOC – 0.2 lb/MMBtu based on AP-42 Table 1.3-3 dated 5/10
- Visible Emissions – 06-096 C.M.R. ch. 101

Natural Gas

- PM – 0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT/BPT
- SO₂ – 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
- Visible Emissions – 06-096 C.M.R. ch. 101

The BACT and BPT emission limits for Boilers #1-#7 are the following:

Unit	Pollutant	lb/MMBtu
Boilers #5 and #6 <i>Natural Gas</i>	PM	0.05
Boilers #5 and #6 <i>Distillate Fuel</i>	PM	0.08

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boilers #1 & #2 <i>Natural Gas</i>	0.09	0.09	0.09	--	0.18	0.15	0.01
Boilers #1 & #2 <i>Distillate Fuel</i>	0.15	0.15	0.15	--	0.26	0.07	--
Boilers #3 & #4 <i>Natural Gas</i>	0.08	0.08	0.08	--	0.16	0.14	0.01
Boilers #5 & #6 <i>Natural Gas</i>	0.35	0.35	0.35	--	0.68	0.57	0.04
Boilers #5 & #6 <i>Distillate Fuel</i>	0.56	0.56	0.56	0.01	1.00	0.25	0.01
Boiler #7 <i>Natural Gas</i>	0.10	0.10	0.10	--	0.19	0.16	0.01

2. Visible Emissions

Firing Natural Gas

Visible emissions from Boilers #1-#7 when firing natural gas shall not exceed 10% opacity on a six-minute block average basis.

Firing Distillate Fuel

Visible emissions from Boilers #1, #2, #5, and #6 when firing distillate fuel shall not exceed 20% opacity on a six-minute block average basis.

3. Periodic Monitoring

Periodic monitoring for Boilers #1-#7 shall include recordkeeping to document fuel use both on a monthly and calendar year total basis. Documentation shall include the type of fuel used and sulfur content of the fuel, as applicable.

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

Due to the sizes of Boilers #1-#7, they are **not** subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989. [40 C.F.R. § 60.40c]

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

Boilers #3, #4, and #7 (Licensed to fire natural gas)

Boilers #3, #4, and #7 are **not** subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area*

Sources, 40 C.F.R. Part 63, Subpart JJJJJJ (Subpart JJJJJJ). Natural gas-fired units are exempt from the requirements of this regulation. [40 C.F.R. §§ 63.11195(e)]

Boilers #1, #2, #5, and #6 (licensed to fire natural gas and distillate fuel)

Boilers #1, #2, #5, and #6 are subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63, Subpart JJJJJJ. The units are considered existing oil boilers. [40 C.F.R. §§ 63.11193 and 63.11195]

Applicable federal 40 C.F.R. Part 63, Subpart JJJJJJ requirements include the following. Additional rule information can be found on [EPA's website; https://www.epa.gov/stationary-sources-air-pollution/compliance-industrial-commercial-and-institutional-area-source](https://www.epa.gov/stationary-sources-air-pollution/compliance-industrial-commercial-and-institutional-area-source).

a. Compliance Dates, Notifications, and Work Practice Requirements

(1) Boiler Tune-Up Program

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

(ii) Tune-ups 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 (Boilers #5 & #6)	Every 2 years
New and Existing Oil, Biomass, and Coal fired Boilers with Less Frequent Tune-up Requirements Oil fired boilers with a heat input capacity of ≤ 5 MMBtu/hr (Boilers #1 & #2)	Every 5 years

[40 C.F.R. § 63.11223(a) and Table 2]

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

1. As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted, not to exceed 36 months from the previous inspection. Delay of the burner inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for oil fired boilers less than or equal to 5 MMBtu/hour,

- boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [40 C.F.R. § 63.11223(b)(1)]
2. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 C.F.R. § 63.11223(b)(2)]
 3. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted, not to exceed 36 months from the previous inspection. Delay of the inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for oil fired boilers less than or equal to 5 MMBtu/hour, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [40 C.F.R. § 63.11223(b)(3)]
 4. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]
 5. Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 C.F.R. § 63.11223(b)(5)]
 6. If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up. [40 C.F.R. § 63.11223(b)(7)]
- (iv) Tune-Up Report: A tune-up report shall be maintained onsite and, submitted to the Department and/or EPA upon request. The report shall contain the following information:
1. The concentration of CO in the effluent stream (ppmv) and oxygen (volume percent) measured at high fire or typical operating load both **before** and **after** the boiler tune-up;
 2. A description of any corrective actions taken as part of the tune-up of the boiler; and
 3. The types and amounts of fuels used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. [40 C.F.R. § 63.11223(b)(6)]
- (v) After conducting the initial boiler tune-up, a Notification of Compliance Status was required to be submitted to EPA no later than July 19, 2014. [40 C.F.R. § 63.11225(a)(4) and 40 C.F.R. § 63.11214(b)]

(2) Compliance Report

For every two-year compliance period set for Boilers #5 and #6, and for every five-year compliance period set for Boilers #1 and #2, Scarborough shall prepare a compliance report by March 1st of the following year to document the information below for the two- or five-year period. The report shall be maintained by the source and submitted to the Department and/or to the EPA upon request. The report must include the items contained in §§ 63.11225(b)(1) and (2), including the following: [40 C.F.R. § 63.11225(b)]

- (i) Company name and address;
- (ii) A statement of whether the source has complied with all the relevant requirements of this Subpart;
- (iii) A statement certifying truth, accuracy, and completeness of the notification and signed by a responsible official and containing the official's name, title, phone number, email address, and signature;
- (iv) The following certifications, as applicable:
 1. "This facility complies with the requirements in 40 C.F.R. § 63.11223 to conduct tune-ups of each boiler in accordance with the frequency specified in this Subpart."
 2. "No secondary materials that are solid waste were combusted in any affected unit."
 3. "This facility complies with the requirement in §§ 63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available."

b. Recordkeeping

- (1) Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart JJJJJ including the following [40 C.F.R. § 63.11225(c)]:
 - (i) Copies of notifications and reports with supporting compliance documentation;
 - (ii) 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;
 - (iii) Records of the occurrence and duration of each malfunction of each applicable boiler; and
 - (iv) Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler.

(2) Records shall be in a form suitable and readily available for expeditious review. Each record must be kept for 5 years following the date of each recorded action. Each record must be kept on-site or be accessible from a central location by computer or other means that instantly provides access at the site for at least 2 years after the date of each recorded action. The records may be maintained off-site for the remaining 3 years. [40 C.F.R. § 63.11225(d)] Note: Standard Condition (8) of this license requires all records be retained for six years; therefore, the five-year record retention requirement of Subpart JJJJJ shall be streamlined to the more stringent six-year requirement.

C. HS Caterpillar Emergency Generator [Pre-2006 Generator]

Scarborough operates a 500 kW Caterpillar emergency generator located at the High School. The HS Caterpillar Generator is a generator set consisting of an engine and an electrical generator. The emergency generator has an engine rated at 4.77 MMBtu/hr, fires distillate fuel, and was manufactured in 1993.

1. BPT Findings

The BPT emission limits for the HS Caterpillar Generator were based on the following:

- PM/PM₁₀/PM_{2.5} – 0.12 lb/MMBtu from 06-096 C.M.R. ch. 103
- SO₂ – Combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
- NO_x – 3.2 lb/MMBtu from AP-42 Table 3.4-1 dated 4/25
- CO – 0.85 lb/MMBtu from AP-42 Table 3.4-1 dated 4/25
- VOC – 0.09 lb/MMBtu from AP-42 Table 3.4-1 dated 4/25
- Visible Emissions – 06-096 C.M.R. ch. 101

The BPT emission limits for the HS Caterpillar Generator are the following:

Unit	Pollutant	lb/MMBtu
HS Caterpillar Generator	PM	0.12

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
HS Caterpillar Generator	0.57	0.57	0.57	0.01	15.26	4.05	0.43

Visible emissions from the HS Caterpillar Generator shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time Facility shall either meet the normal operating visible emissions standard or the following work practice standards and alternative visible emissions standard.

- a. The duration of the startup shall not exceed 30 minutes per event;
- b. Visible emissions shall not exceed 50% opacity on a six-minute block average basis; and
- c. Scarborough shall keep records of the date, time, and duration of each startup.

Use of the work practice standards and alternative visible emissions standard in lieu of the normal operating standard is limited to no more than once per day.

Note: This does not limit the engine to one startup per day. It only limits the use of the alternative emission standard to once per day.

The HS Caterpillar Generator 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, Scarborough 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 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. Chapter 169

The HS Caterpillar Generator was installed prior to the effective date of *Stationary Generators*, 06-096 C.M.R. ch. 169 and is therefore exempt from this rule pursuant to section 1.

3. New Source Performance Standards (NSPS)

Due to the date of manufacture of the compression ignition emergency engine listed above, the HS Caterpillar Generator is not subject to the New Source Performance Standards (NSPS) *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE)*, 40 C.F.R. Part 60, Subpart IIII since the unit was manufactured prior to April 1, 2006. [40 C.F.R. § 60.4200]

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

National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 C.F.R. Part 63, Subpart ZZZZ is **not** applicable to the emergency engine listed above. The unit is considered an existing, emergency stationary reciprocating internal combustion engine at an area HAP source. However, it is considered exempt from the requirements of 40 C.F.R. Part 63, Subpart ZZZZ since it is categorized as a residential, commercial, or institutional emergency engine and it does not operate or is not contractually obligated to be available in a demand response program, during a period of deviation from standard voltage or frequency, or for supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in 40 C.F.R. § 63.6640(f)(4)(ii).

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

D. WS and MS Caterpillar Emergency Generators [Post-2006 Generators]

Scarborough operates two more emergency 500 kW Caterpillar generators located at Wentworth School and Middle School. The emergency generators are generator sets consisting of an engine and an electrical generator. The WS Caterpillar Generator and the MS Caterpillar Generator each has an engine rated at 4.77 MMBtu/hr, and both fire distillate fuel. The WS Caterpillar Generator was installed in 2014, and MS Caterpillar Generator was installed in 2025.

1. BACT and BPT Findings

Note: BACT is for the MS Caterpillar Generator, and BPT is for the WS Caterpillar Generator.

The BACT emission limits for the MS Caterpillar Generator were based on the following:

PM/PM ₁₀ /PM _{2.5}	–	0.12 lb/MMBtu from 06-096 C.M.R. ch. 103
SO ₂	–	Combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO _x	–	3.2 lb/MMBtu from AP-42 Table 3.4-1 dated 4/25
CO	–	0.85 lb/MMBtu from AP-42 Table 3.4-1 dated 4/25
VOC	–	0.09 lb/MMBtu from AP-42 Table 3.4-1 dated 4/25

Visible Emissions – 06-096 C.M.R. ch. 101

The BPT emission limits for the WS Caterpillar Generator are based on the following:

- PM/PM₁₀/PM_{2.5} – 0.12 lb/MMBtu from 06-096 C.M.R. ch. 103
- SO₂ – Combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
- NO_x – 0.0926 lb/MMBtu, manufacturer’s guarantee
- CO – 0.8099 lb/MMBtu, manufacturer’s guarantee
- VOC – 0.0440 lb/MMBtu, manufacturer’s guarantee
- Visible Emissions – 06-096 C.M.R. ch. 101

The BACT/BPT emission limits for the WS and MS Caterpillar Generators are the following:

Unit	Pollutant	lb/MMBtu
WS Caterpillar Generator	PM	0.12
MS Caterpillar Generator	PM	0.12

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
WS Caterpillar Generator	0.57	0.57	0.57	0.01	0.44	3.86	0.21
MS Caterpillar Generator	0.57	0.57	0.57	0.01	15.26	4.05	0.43

Visible emissions from each of the emergency generators shall not exceed 20% opacity on a six-minute block average basis.

The WS Caterpillar Generator shall be limited to 336 hours per calendar year of operation for any reason, including startup and shutdown, testing, and both emergency and non-emergency use. Compliance shall be demonstrated by a written or electronic log of all generator operating hours. [06-096 C.M.R. ch. 115, BPT] This limit does not override applicable non-emergency use constraints in NSPS Subpart IIII, addressed in a following section.

2. Chapter 169

WS Caterpillar Generator

The WS Caterpillar Generator was installed prior to the effective date of *Stationary Generators*, 06-096 C.M.R. ch. 169 and is therefore exempt from this rule pursuant to section 1.

MS Caterpillar Generator

Stationary Generators, 06-096 C.M.R. ch. 169 (Chapter 169), is applicable to the MS Caterpillar Generator. It is an emergency generator powered by an engine with a rated output of less than 1,000 brake horsepower (747 kW). Chapter 169 identifies emission standards for generator engines subject to this chapter and stack height requirements for certain generator engines subject to this chapter.

a. Chapter 169 Emission Standards Requirements

For the MS Caterpillar Generator, Scarborough shall comply with the emission standards for emergency generators by complying with the applicable standards contained in 40 C.F.R. Part 60, Subpart III. [06-096 C.M.R. ch. 169, § 4(B)(1)]

b. Chapter 169 Stack Height Requirements

Chapter 169 identifies stack height requirements for any stack used to exhaust a generator engine or combination of generator engines with a combined rated output equal to or greater than 1,000 brake horsepower (747 kW). Individual generator engines with a maximum power capacity of less than 300 kW are not included in the assessment of the combined generator power capacity exhausted through a common stack. [06-096 C.M.R. ch. 169, § 6]

There are no stack height requirements in Chapter 169 applicable to MS Caterpillar Generator because it exhausts through its own stack and its rated output is less than 1,000 brake horsepower (747 kilowatts). [06-096 C.M.R. ch. 169, § 6]

3. New Source Performance Standards

Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 C.F.R. Part 60, Subpart III is applicable to the WS and MS Caterpillar Generators since the units were ordered after July 11, 2005, and manufactured after April 1, 2006. [40 C.F.R. § 60.4200]

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

a. Manufacturer Certification Requirement

Each engine shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in 40 C.F.R. § 60.4202. [40 C.F.R. § 60.4205(b)]

b. Ultra-Low Sulfur Fuel Requirement

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

c. Non-Resetable Hour Meter Requirement

A non-resettable hour meter shall be installed and operated on each engine. [40 C.F.R. § 60.4209(a)]

d. Operation and Maintenance Requirements

The engine shall be operated and maintained according to the manufacturer's emission-related written instructions. Scarborough may only change those emission-related settings that are permitted by the manufacturer. [40 C.F.R. § 60.4211(a)]

Scarborough shall have available for review by the Department a copy of the manufacturer's emission-related written instructions for engine operation and maintenance. [06-096 C.M.R. ch. 115, BPT]

e. Initial Notification Requirement

No initial notification is required under 40 C.F.R. Part 60, Subpart IIII for emergency engines. [40 C.F.R. § 60.4214(b)]

f. Recordkeeping

Scarborough shall keep records that include the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the number of hours the unit operated for emergency purposes, the number of hours the unit operated for non-emergency purposes, and the reason the engine was in operation during each time. [40 C.F.R. § 60.4214(b)]

4. National Emissions Standards for Hazardous Air Pollutants (NESHAP); 40 C.F.R. Part 63, Subpart ZZZZ

Pursuant to 40 C.F.R. § 63.6590(c), stationary compression ignition engines subject to regulations under 40 C.F.R. Part 60, Subpart IIII must meet the requirements of Subpart ZZZZ by meeting the requirements of 40 C.F.R. Part 60, Subpart IIII. No further requirements apply for such engines under Subpart ZZZZ. [40 C.F.R. § 63.6590(c)]

E. General Process Emissions

Visible emissions from any general process source shall not exceed 20% opacity on a six-minute block average basis.

F. Fugitive Emissions

Scarborough shall not cause emissions of any fugitive dust during any period of construction, reconstruction, or operation without taking reasonable precautions. Such reasonable precautions shall be included in the facility’s continuing program of best management practices for suppression of fugitive particulate matter. See 06-096 C.M.R. ch. 101, § 4(C) for a list of potential reasonable precautions.

Scarborough shall not cause or allow visible emissions within 20 feet of ground level, measured as any level of opacity and not including water vapor, beyond the legal boundary of the property on which such emissions occur. Compliance with this standard shall be determined pursuant to 40 C.F.R. Part 60, Appendix A, Method 22.

G. Annual Emissions

The table below provides an estimate of facility-wide annual emissions for the purposes of calculating the facility’s annual air license fee and establishing the facility’s potential to emit (PTE). Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, unquantifiable fugitive particulate matter emissions are not included except when required by state or federal regulations. Maximum potential emissions were calculated based on the following assumptions:

- Operating Boilers #1-#7 for 8,760 hrs/yr;
- Operating the HS Caterpillar Generator and the MS Caterpillar Generator for 100 hrs/yr each of non-emergency operation;
- Operating the WS Caterpillar Generator for 336 hrs/yr.

This information does not represent a comprehensive list of license restrictions or permissions. That information is provided in the Order section of this license.

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

	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	VOC
Boilers #1 - #7	3.9	3.9	3.9	0.1	7.1	4.5	0.3
HS Caterpillar Generator	0.1	0.1	0.1	0.1	0.8	0.2	0.1
WS Caterpillar Generator	0.1	0.1	0.1	0.1	0.1	0.7	0.1
MS Caterpillar Generator	0.1	0.1	0.1	0.1	0.8	0.2	0.1
Total TPY	4.2	4.2	4.2	0.4	8.8	5.6	0.6

Pollutant	Tons/year
Single HAP	7.9
Total HAP	19.9

III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source is determined by the Department on a case-by-case basis. In accordance with 06-096 C.M.R. ch. 115, an ambient air quality impact analysis is not required for a minor source if the total licensed annual emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

Pollutant	Tons/Year
PM ₁₀	25
PM _{2.5}	15
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.

This determination is based on information provided by the applicant regarding licensed emission units. If the Department determines that any parameter (e.g., stack size, configuration, flow rate, emission rates, nearby structures, etc.) deviates from what was included in the application, the Department may require Scarborough to submit additional information and may require an ambient air quality impact analysis at that time.

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-897-71-G-N/A subject to the following conditions.

Severability. The invalidity or unenforceability of any provision of this License or part thereof shall not affect the remainder of the provision or any other provisions. This License shall be

construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S. § 347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to beginning actual construction of a modification, unless specifically provided for in Chapter 115. [06-096 C.M.R. ch. 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 C.M.R. ch. 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 C.M.R. ch. 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S. § 353-A. [06-096 C.M.R. ch. 115] Payment of the annual air emission license fee for Scarborough is due by the end of August of each year. [38 M.R.S. § 353-A(3)]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 C.M.R. ch. 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 C.M.R. ch. 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 C.M.R. ch. 115]

- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license.
[06-096 C.M.R. ch. 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.
[06-096 C.M.R. ch. 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 C.F.R. Part 60 or other method approved or required by the Department, the licensee shall:
- A. Perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - 1. Within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 - 2. Pursuant to any other requirement of this license to perform stack testing.
 - B. Install or make provisions to install test ports that meet the criteria of 40 C.F.R. Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - C. Submit a written report to the Department within thirty (30) days from date of test completion.
[06-096 C.M.R. ch. 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. Within thirty (30) days following receipt of the written test report by the Department, or another alternative timeframe approved by the Department, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 C.F.R. Part 60 or other method approved or required by the Department; and

- B. The days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
- C. The licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
[06-096 C.M.R. ch. 115]
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or license requirement. [06-096 C.M.R. ch. 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 C.M.R. ch. 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.
[06-096 C.M.R. ch. 115]
- (16) The licensee shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S. § 605). [06-096 C.M.R. ch. 115]

SPECIFIC CONDITIONS

(17) **Boilers #1 - #7**

A. Fuel

1. Boilers #3, #4, and #7 shall fire only natural gas. [06-096 C.M.R. ch. 115, BPT and BACT]

2. Boilers #1, #2, #5, and #6 shall fire natural gas or distillate fuel. [06-096 C.M.R. ch. 115, BPT]
3. Scarborough shall not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm). [06-096 C.M.R. ch. 115, BPT]
4. Compliance shall be demonstrated by fuel records showing the quantity and type of fuel delivered. Records of annual fuel use shall be kept on a monthly and calendar year total basis. Fuel sulfur content compliance shall be demonstrated by fuel delivery receipts from the supplier, a statement from the supplier that the fuel delivered meets Maine’s fuel sulfur content standards, certificate of analysis, or testing of fuel in the tank on-site. [06-096 C.M.R. ch. 115, BPT]

B. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #5 and #6 <i>Natural Gas</i>	PM	0.05	06-096 C.M.R. ch. 115, BPT
Boiler #5 and #6 <i>Distillate Fuel</i>	PM	0.08	06-096 C.M.R. ch. 115, BPT

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

Emission Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boilers #1 & #2 <i>Natural Gas</i>	0.09	0.09	0.09	--	0.18	0.15	0.01
Boilers #1 & #2 <i>Distillate Fuel</i>	0.15	0.15	0.15	--	0.26	0.07	--
Boilers #3 & #4 <i>Natural Gas</i>	0.08	0.08	0.08	--	0.16	0.14	0.01
Boilers #5 & #6 <i>Natural Gas</i>	0.35	0.35	0.35	--	0.68	0.57	0.04
Boilers #5 & #6 <i>Distillate Fuel</i>	0.56	0.56	0.56	0.01	1.00	0.25	0.01
Boiler #7 <i>Natural Gas</i>	0.10	0.10	0.10	--	0.19	0.16	0.01

D. Visible Emissions

Natural Gas

Visible emissions from Boilers #1-#7 when firing natural gas shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(3)]

Distillate Fuel

Visible emissions from Boilers #1, #2, #5, and #6 when firing distillate fuel shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(2)]

E. Operational Limitation

Scarborough may only fire distillate fuel in Boilers #1, #2, #5, and #6 during periods of gas curtailment or supply interruption (as defined in 40 C.F.R. § 63.11237 “Period of gas curtailment or supply interruption”), startups, or for periodic testing, maintenance, or operator training on liquid fuel. Periodic testing, maintenance, or operator training on liquid fuel shall not exceed a combined total of 48 hours during any calendar year.

[06-096 C.M.R. ch. 115, BPT]

F. Scarborough shall comply with all requirements of 40 C.F.R. Part 63, Subpart JJJJJ applicable to Boilers #1, #2, #5, and #6 including, but not limited to, the following: [incorporated under 06-096 C.M.R. ch. 115, BPT]

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

- a. Each tune-up shall be conducted at a frequency specified by the rule and based on the size, age, and operations of the boiler. See chart below:

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 <i>(Boilers #5 & #6)</i>	Every 2 years
New and Existing Oil, Biomass, and Coal fired Boilers with Less Frequent Tune-up Requirements Oil fired boilers with a heat input capacity of ≤5MMBtu/hr <i>(Boilers #1 & #2)</i>	Every 5 years

[40 C.F.R. § 63.11223(a) and Table 2]

- b. The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:

- (1) As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted, not to exceed 36 months from the previous inspection. Delay of the burner inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for oil fired boilers less than or equal to 5 MMBtu/hour, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [40 C.F.R. § 63.11223(b)(1)]

- (2) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 C.F.R. § 63.11223(b)(2)]
- (3) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted, not to exceed 36 months from the previous inspection. Delay of the inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for oil fired boilers less than or equal to 5 MMBtu/hour, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [40 C.F.R. § 63.11223(b)(3)]
- (4) Optimize total emissions of CO, consistent with manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]
- (5) Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 C.F.R. § 63.11223(b)(5)]
- (6) If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up. [40 C.F.R. § 63.11223(b)(7)]

- c. Tune-Up Report: A tune-up report shall be maintained onsite and submitted to the Department and EPA upon request. The report shall contain the following information:
 - (1) The concentration of CO in the effluent stream (ppmv) and oxygen (volume percent) measured at high fire or typical operating load both **before** and **after** the boiler tune-up;
 - (2) A description of any corrective actions taken as part of the tune-up of the boiler; and
 - (3) The types and amounts of fuels used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. [40 C.F.R. § 63.11223(b)(6)]

2. Compliance Report

For every two-year compliance period for Boilers #5 and #6, and every five-year compliance period for Boilers #1 and #2, Scarborough shall prepare a compliance report shall be prepared by March 1st of the following year to document the information below for the two or five-year period. The report shall be maintained by the source and submitted to the Department and/or to the EPA upon request. The

report must include the items contained in §§ 63.11225(b)(1) and (2), including the following: [40 C.F.R. § 63.11225(b)]

- a. Company name and address;
- b. A statement of whether the source has complied with all the relevant requirements of this Subpart;
- c. A statement certifying truth, accuracy, and completeness of the notification and signed by a responsible official and containing the official's name, title, phone number, email address, and signature;
- d. The following certifications, as applicable:
 - (1) "This facility complies with the requirements in 40 C.F.R. § 63.11223 to conduct tune-ups of each boiler in accordance with the frequency specified in this Subpart."
 - (2) "No secondary materials that are solid waste were combusted in any affected unit."
 - (3) "This facility complies with the requirement in §§ 63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available."

3. Recordkeeping

- a. Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart JJJJJ including the following [40 C.F.R. § 63.11225(c)]:
 - (1) Copies of notifications and reports with supporting compliance documentation;
 - (2) Identification of each boiler, the date of tune-up, procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned;
 - (3) Records of the occurrence and duration of each malfunction of each applicable boiler; and
 - (4) Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler.
- b. Records shall be in a form suitable and readily available for expeditious review. Each record must be kept for 5 years following the date of each recorded action. Each record must be kept on-site or be accessible from a central location by computer or other means that instantly provides access at the site for at least 2 years after the date of each recorded action. The records may be maintained off-site for the remaining 3 years. [40 C.F.R. § 63.11225(d)] Note: Standard Condition (8) of this license requires all records be retained for six years;

therefore, the five-year record retention requirement of Subpart JJJJJ shall be streamlined to the more stringent six-year requirement.

(18) **HS Caterpillar Generator**

- A. The HS Caterpillar Generator shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 C.M.R. ch. 115, BPT]
- B. Scarborough 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 number of hours each unit operated for emergency purposes, the number of hours each unit operated for non-emergency purposes, and the reason the engine was in operation during each time. [06-096 C.M.R. ch. 115, BPT]
- C. The fuel sulfur content for the HS Caterpillar Generator shall be limited to 0.0015% sulfur by weight. Compliance shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of the fuel in the tank on-site. [06-096 C.M.R. ch. 115, BPT]
- D. Emissions shall not exceed the following:

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

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

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
HS Caterpillar Generator	0.57	0.57	0.57	0.01	15.26	4.05	0.43

F. **Visible Emissions**

Visible emissions from the HS Caterpillar Generator shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time Scarborough shall either meet the normal operating visible emissions standard or the following work practice standards and alternative visible emissions standard.

1. The duration of the startup shall not exceed 30 minutes per event;
2. Visible emissions shall not exceed 50% opacity on a six-minute block average basis; and
3. Scarborough shall keep records of the date, time, and duration of each startup.

Use of the work practice standards and alternative visible emissions standard in lieu of the normal operating standard is limited to no more than once per day.

Note: This does not limit the engine to one startup per day. It only limits the use of the alternative emission standard to once per day.

[06-096 C.M.R. ch. 101, § 4(A)(4)]

- G. The HS Caterpillar Generator is 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 and/or fire pumps 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 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 C.M.R. ch. 115, BPT]

(19) **WS and MS Caterpillar Emergency Generators**

- A. The MS Caterpillar Generator shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 C.M.R. ch. 115, BACT]
- B. The WS Caterpillar Generator shall be limited to 336 hours per calendar year of operation for any reason, including startup and shutdown, testing, and both emergency and non-emergency use. A non-resettable hour meter shall be installed and operated on the generator. Compliance with the hour limit shall be demonstrated by a written or electronic log of all generator operating hours. [06-096 C.M.R. ch. 115, BPT]
- C. Scarborough shall keep records of all maintenance conducted on the engine associated with the WS Caterpillar Generator and the MS Caterpillar Generator. [06-096 C.M.R. ch. 115, BPT]
- D. Emissions shall not exceed the following:

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

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

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
WS Caterpillar Generator	0.57	0.57	0.57	0.01	0.44	3.86	0.21
MS Caterpillar Generator	0.57	0.57	0.57	0.01	15.26	4.05	0.43

F. Visible Emissions

Visible emissions from each of the emergency generators shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(4)]

G. The WS Caterpillar Generator shall meet the applicable requirements of 40 C.F.R. Part 60, Subpart III, including the following: [incorporated under 06-096 C.M.R. ch. 115, BPT]

1. Manufacturer Certification

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

2. Ultra-Low Sulfur Fuel

The fuel fired in the engine shall not exceed 15 ppm sulfur (0.0015% sulfur). Compliance with the fuel sulfur content limit shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of the fuel in the tank on-site. [40 C.F.R. § 60.4207(b) and 06-096 C.M.R. ch. 115, BPT]

3. Non-Resettable Hour Meter

A non-resettable hour meter shall be installed and operated on the engine. [40 C.F.R. § 60.4209(a)]

4. Operation and Maintenance

The engine shall be operated and maintained according to the manufacturer's emission-related written instructions. Scarborough may only change those emission-related settings that are permitted by the manufacturer. [40 C.F.R. § 60.4211(a)]

Scarborough shall have available for review by the Department a copy of the manufacturer's emission-related written instructions for engine operation and maintenance. [06-096 C.M.R. ch. 115, BPT]

(20) **General Process Sources**

Visible emissions from any general process source shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(B)(4)]

(21) **Fugitive Emissions**

A. Scarborough shall not cause emissions of any fugitive dust during any period of construction, reconstruction, or operation without taking reasonable precautions. Such reasonable precautions shall be included in the facility's continuing program of best management practices for suppression of fugitive particulate matter. See 06-096 C.M.R. ch. 101, § 4(C) for a list of potential reasonable precautions.

B. Scarborough shall not cause or allow visible emissions within 20 feet of ground level, measured as any level of opacity and not including water vapor, beyond the legal boundary of the property on which such emissions occur. Compliance with this standard shall be determined pursuant to 40 C.F.R. Part 60, Appendix A, Method 22.

[06-096 C.M.R. ch. 101, § 4(C)]

(22) If the Department determines that any parameter value pertaining to construction and operation of the emissions units, including but not limited to stack size, configuration, flow rate, emission rates, nearby structures, etc., deviates from what was submitted in the application or ambient air quality impact analysis for this air emission license, Scarborough may be required to submit additional information. Upon written request from the Department, Scarborough shall provide information necessary to demonstrate AAQS will not be exceeded, potentially including submission of an ambient air quality impact analysis or an application to amend this air emission license to resolve any deficiencies and ensure compliance with AAQS. Submission of this information is due within 60 days of the Department's written request unless otherwise stated in the Department's letter.

[06-096 C.M.R. ch. 115, § 2(O)]

Scarborough Public Schools
Cumberland County
Scarborough, Maine
A-897-71-G-N/A

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

DONE AND DATED IN AUGUSTA, MAINE THIS 7th DAY OF APRIL, 2026.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:  for
MELANIE LOYZIM, COMMISSIONER

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

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

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 4/30/2025

Date of application acceptance: 5/12/2025

This Order prepared by Jack Doran, Bureau of Air Quality.