



DEPARTMENT ORDER

**Sebasticook Valley Health  
Somerset County  
Pittsfield, Maine  
A-1136-71-A-N**

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

**FINDINGS OF FACT**

After review of the air emission license 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**

Sebasticook Valley Health (SVH) has applied for an Air Emission License for the operation of emission sources associated with their healthcare facility.

The equipment addressed in this license is located at 447 North Main Street, Pittsfield, Maine.

**B. Emission Equipment**

The following equipment is addressed in this air emission license:

**Boilers**

<b><u>Equipment</u></b>	<b><u>Max. Capacity (MMBtu/hr)</u></b>	<b><u>Maximum Firing Rate (gal/hr)</u></b>	<b><u>Fuel Type, % sulfur</u></b>	<b><u>Date of Manuf.</u></b>	<b><u>Date of Install.</u></b>	<b><u>Stack #</u></b>
Boiler #1	3.4	23.9	Distillate Fuel, 0.0015%	2012	2012	1
Boiler #2	3.4	23.9	Distillate Fuel, 0.0015%	2012	2012	1
Boiler #3	3.4	23.9	Distillate Fuel, 0.0015%	2012	2012	1

Stationary Engines

<u>Equipment</u>	<u>Max. Input Capacity (MMBtu/hr)</u>	<u>Rated Output Capacity (kWe)</u>	<u>Fuel Type, % sulfur</u>	<u>Firing Rate (gal/hr)</u>	<u>Date of Manuf.</u>	<u>Date of Install.</u>
Generator #1	2.4	255	Distillate Fuel, 0.0015%	17.2	2013	2013
Generator #2	2.4	255	Distillate Fuel, 0.0015%	17.2	2013	2013
Generator #3	1.6	150	Distillate Fuel, 0.0015%	11.4	2004	2004
Generator #4	1.1	65	Liquefied Petroleum Gas, negl.	11.8	1993	1993
Generator #5	1.0	60	Liquefied Petroleum Gas, negl.	10.9	1992	1992

SVH may operate small stationary engines smaller than 0.5 MMBtu/hr. These engines are considered insignificant activities and are not required to be included in this license. However, they are still subject to applicable State and Federal regulations. More information regarding requirements for small stationary engines is available on the Department’s website at the link below.

<http://www.maine.gov/dep/air/publications/docs/SmallRICEGuidance.pdf>

Additionally, SVH may operate portable engines used for maintenance or emergency-only purposes. These engines are considered insignificant activities and are not required to be included in this license. However, they may still be subject to applicable State and Federal regulations.

C. Definitions

Distillate Fuel - For the purposes of this license, *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.

Kilowatt-electrical (kWe) – The actual electrical output of a generator (after efficiency losses within the generator set); kilowatt-mechanical – efficiency losses = kWe

Portable Engine - For the purposes of this license, *portable engine* means an internal combustion engine which is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. This definition does NOT include engines which remain or will remain at a location (excluding storage locations) for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. A location is any single site at a building, structure, facility, or installation. Any engine that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period.

D. Application Classification

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

SVH is classified as an existing source that is applying for its first air emission license. 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

The facility is licensed as follows:

- As a natural minor source of air emissions, because facility emissions cannot exceed major source thresholds for criteria pollutants; and
- As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for HAP.

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

A. Introduction

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

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

B. Boilers #1, #2 and #3

SVH operates Boilers #1, #2 and #3 to supply building heat throughout their facility. The boilers are each rated at 3.4 MMBtu/hr, and each boiler fires distillate fuel. The boilers were all installed in 2012, and they exhaust through a common stack.

1. BACT Findings

SVH has submitted a BACT analysis for control of emissions from Boilers #1, #2 and #3.

a. Particulate Matter (PM, PM<sub>10</sub>)

Emissions of PM from distillate fuel-fired boilers of similar age are generally very low, and the installation of add-on emission controls for PM is not economically feasible. In addition to only firing low-ash content fuel (distillate fuel) in the boilers, SVH proposes to control PM emissions from the boilers through the use of efficient combustion technology and by limiting the boilers' PM emission rates to 0.27 lb/hr per boiler.

b. Sulfur Dioxide (SO<sub>2</sub>)

Techniques available for limiting SO<sub>2</sub> emissions from distillate fuel-fired boilers include SO<sub>2</sub> scrubbing systems and the use of low sulfur fuel oil. For boilers of this size and fuel type, the uncontrolled SO<sub>2</sub> emission levels are already low. The addition of SO<sub>2</sub> scrubbing systems would have a minimal impact on the amount of SO<sub>2</sub> emissions from the boilers and are therefore not economically feasible. SVH proposes BACT for SO<sub>2</sub> to be a maximum fuel sulfur content of 0.0015% sulfur by weight.

c. Nitrogen Oxides (NO<sub>x</sub>)

SVH considered several control strategies for the control of NO<sub>x</sub> emissions from the boilers, including Selective Catalytic Reduction (SCR), Selective Non-Catalytic Reduction (SNCR), low NO<sub>x</sub> burners, Flue Gas Recirculation (FGR), and good operating and maintenance practices.

SCR and SNCR have both been utilized on utility boilers and large industrial water-tube boilers for NO<sub>x</sub> control. However, both technologies could have negative environmental impacts result from emissions of unreacted ammonia. Additionally, SNCR is not effective in smaller packaged fire-tube boilers due to the lack of furnace space and residence time necessary for efficient SNCR operation.

Finally, the initial capital costs and annual operating costs typically render SCR and SNCR systems cost prohibitive for units less than 50 MMBtu/hr.

The potential NO<sub>x</sub> emissions from the three boilers are 3.44 tons per year per boiler, with the actual NO<sub>x</sub> emissions expected to be much lower. Therefore, additional combustion control technology such as low NO<sub>x</sub> burners and FGR are not economically feasible for these boilers.

SHV proposes that BACT for NO<sub>x</sub> emissions from their three boilers shall be the use of good operating and maintenance practices, and by meeting a NO<sub>x</sub> emission limit not to exceed 0.24 lb/MMBtu of heat input per boiler, and a maximum emission rate of 0.79 lb/hr per boiler.

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

Emissions of CO and VOC from distillate fuel-fired boilers are the result of incomplete combustion, caused by conditions such as insufficient residence time or limited oxygen availability in the boilers.

CO and VOC emissions from boilers of similar size and age are generally managed through good combustion controls and through the proper operation and maintenance of the units, as the installation of add-on emission controls for these pollutants is not economically feasible. Based on the sizes and relatively low emission rates of the boilers, SVH proposes that BACT for CO and VOC emissions from Boilers #1, #2 and #3 shall be the use of efficient burner combustion technology, the proper operation and maintenance of the boilers, and limiting the boilers' emissions to 0.23 lb/hr of CO per boiler and 0.01 lb/hr of VOC per boiler.

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

Distillate Fuel

PM/PM <sub>10</sub>	- 0.08 lb/MMBtu, 06-096 C.M.R. ch. 115, BACT
SO <sub>2</sub>	- based on firing distillate fuel with a maximum sulfur content of 0.0015% by weight
NO <sub>x</sub>	- 0.235 lb/MMBtu, based on Manufacturer's Data Sheet
CO	- 0.07 lb/MMBtu, based on Manufacturer's Data Sheet
VOC	- 0.0024 lb/MMBtu, based on Manufacturer's Data Sheet
Visible Emissions	- 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for the boilers are the following:

<b>Unit</b>	<b>Pollutant</b>	<b>lb/MMBtu</b>	<b>Origin and Authority</b>
Boilers #1, #2 and #3	PM	0.08	06-096 C.M.R. ch. 115, BACT

<b>Unit</b>	<b>PM (lb/hr)</b>	<b>PM<sub>10</sub> (lb/hr)</b>	<b>SO<sub>2</sub> (lb/hr)</b>	<b>NO<sub>x</sub> (lb/hr)</b>	<b>CO (lb/hr)</b>	<b>VOC (lb/hr)</b>
Boiler #1 Distillate Fuel	0.27	0.27	0.01	0.79	0.23	0.01
Boiler #2 Distillate Fuel	0.27	0.27	0.01	0.79	0.23	0.01
Boiler #3 Distillate Fuel	0.27	0.27	0.01	0.79	0.23	0.01

Visible emissions from the common stack for the boilers shall not exceed an opacity of 30 percent on a six (6) minute block average basis.

There are no license limits on the quantity of fuel that can be fired on an annual basis in Boilers #1, #2 and #3.

3. Fuel Sulfur Content Requirements

Boilers #1, #2 and #3 are licensed to fire only distillate fuel having a maximum sulfur content of 0.0015% by weight.

4. Periodic Monitoring

SVH shall document the type and sulfur content of the fuel used in Boilers #1, #2 and #3 through the use of fuel delivery receipts.

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

Due to the sizes of the three boilers, 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]

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

Boilers #1, #2 and #3 are subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63, Subpart JJJJJ. The units are considered existing oil boilers and are all rated with maximum heat inputs at less than 10 MMBtu/hr. [40 C.F.R. §§63.11193 and 63.11195]

A summary of the currently applicable federal 40 C.F.R. Part 63, Subpart JJJJJ requirements is listed below. Notification forms and additional rule information can be found on the following website: <https://www.epa.gov/stationary-sources-air-pollution/compliance-industrial-commercial-and-institutional-area-source>.

a. Compliance Dates, Notifications, and Work Practice Requirements

(1) Initial Notification of Compliance

An Initial Notification submittal to EPA was due no later than January 20, 2014, or within 120 days after the source became subject to the standard. [40 C.F.R. § 63.11225(a)(2)]

(2) Boiler Tune-Up Program

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

(ii) Boilers #1, #2 and #3 shall each undergo a tune-up at least once every five (5) years, based on their sizes, ages, and operations.

[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 for up to 72 months from the previous inspection. [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 for up to 72 months from the previous inspection. [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, if requested, submitted to EPA. 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)]

(3) Compliance Report

A compliance report shall be prepared by March 1<sup>st</sup> every five years which covers the previous five calendar years. The report shall be maintained by the source and submitted to the Department and/or to the EPA upon request. The report must include the items contained in §§ 63.11225(b)(1) and (2), including the following: [40 C.F.R. § 63.11225(b)]

- (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."

C. Pre-2006 Emergency Engines - Generators #3, #4 and #5

Emergency generators are generator sets, each consisting of an engine and an electrical generator. SVH operates Generators #3, #4 and #5 as emergency generators, each having a date of manufacture prior to April 1, 2006.

Generator #3 was manufactured in 2004, and has an engine with a maximum rated heat input of 1.6 MMBtu/hr firing distillate fuel. Generators #4 and #5 were manufactured in 1993 and 1992, respectively, and both of their engines fire liquefied petroleum gas (LPG). Generator #4 has a maximum rated heat input of 1.1 MMBtu/hr and Generator #5 has a maximum heat input rating of 1.0 MMBtu/hr.

SVH is licensing its on-site generators for emergency use operations, specifically for when grid power is unavailable or otherwise unreliable. As such, SVH has accepted a restriction on the annual non-emergency operating times (readiness testing, maintenance, etc.) for Generators #3, #4 and #5 of 100 hours for each engine.

1. BACT Findings for Distillate Fuel-Fired Generator #3

SVH has submitted a BACT analysis for controlling emissions from Generator #3.

a. Particulate Emissions (PM, PM<sub>10</sub>)

Particulate matter from distillate fuel-fired engines is generally controlled through proper operation and maintenance. For emergency use engines that will be limited to 100 hours per year of non-emergency operation, add-on particulate control equipment would not provide a significant reduction in emissions or other environmental benefits. The installation and operating costs of add-on particulate

controls is not economically feasible. SVH proposes that BACT shall be the proper operation and maintenance of Generator #3, and the limiting of PM and PM<sub>10</sub> emissions from Generator #3 to the manufacturer's emission rate of 0.39 lb/hr, based on the manufacturer's performance testing.

b. Sulfur Dioxide (SO<sub>2</sub>)

Due to the low level of non-emergency operating hours being licensed for Generator #3, the only practical method of limiting its SO<sub>2</sub> emissions is through the use of low sulfur fuel. SVH has proposed that BACT for controlling SO<sub>2</sub> emissions from Generator #3 shall be the use of distillate fuel having a maximum allowable sulfur content of 0.0015% by weight. Based on Generator #3's maximum fuel firing rate of 11.6 gallons per hour, its resulting maximum SO<sub>2</sub> emission rate is 0.0024 lb/hr.

c. Nitrogen Oxides (NO<sub>x</sub>)

Selective Catalytic Reduction (SCR) is often used to reduce NO<sub>x</sub> emissions from distillate fuel-fired engines. Because Generator #3 is limited by this license to 100 hours per year of non-emergency operation (with the actual operating time expected to be much lower), SCR would not provide a significant environmental benefit, thus making the associated installation and operating costs economically unjustifiable. The manufacturer's published NO<sub>x</sub> emission rate for Generator #3 is 1.52 lb/hr, which is significantly less than the EPA Tier 3 emission standard of 2.43 lb/hr for distillate fuel-fired generators of similar size and design on site at SVH. SVH proposes that BACT for the control of NO<sub>x</sub> emissions from Generator #3 shall be the proper operation and maintenance of the unit, combined with meeting the manufacturer's emission limit of 1.52 lb/hr.

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

CO and VOC emissions from distillate fuel-fired generators are generally controlled through proper operation and maintenance. Oxidation catalysts have been used on large prime power applications to reduce CO and VOC emission levels in the exhaust. The use of an oxidation catalyst on an emergency generator of this size and whose hours of operation are limited to 100 hours per year would not provide significant environmental benefit. SVH proposes BACT for CO and VOC emissions from Generator #3 to be emission limits of 0.88 lb/hr and 0.30 lb/hr, respectively. These emission rates are derived from performance testing conducted by the manufacturer for this model engine.

The BACT emission limits for Generator #3 firing distillate fuel are based on the following:

PM/PM <sub>10</sub>	- 0.97 g/kWh, from Engine Manufacturer Emissions Data
SO <sub>2</sub>	- combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO <sub>x</sub>	- 3.8 g/kWh, from Engine Manufacturer Emissions Data
CO	- 2.19 g/kWh, from Engine Manufacturer Emissions Data
VOC	- 0.76 g/kWh, from Engine Manufacturer Emissions Data
Visible Emissions	- 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Generator #3 are the following:

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #3 1.6 MMBtu/hr Distillate fuel	0.39	0.39	0.01	1.52	0.88	0.30

Visible emissions from Generator #3 shall not exceed 20% opacity on a six-minute block average basis.

2. BACT Findings for LPG-Fired Generators #4 and #5

SVH has submitted a BACT analysis for Generators #4 and #5.

a. Particulate Matter (PM, PM<sub>10</sub>)

PM emissions from LPG-fired engines are generally controlled through the use of proper operation and maintenance practices. SVH proposes BACT for PM and PM<sub>10</sub> to be proper operation and maintenance practices and emission limits of 0.011 lb/hr for Generator #4 and 0.010 lb/hr for Generator #5. These limits are based on emission factors obtained from U.S. EPA's AP-42, Chapter 3, Table 3.2-3, *Uncontrolled Emission Factors for 4-Stroke Rich-Burn Engines*.

b. Sulfur Dioxide (SO<sub>2</sub>)

For engines of this size that will be limited by license to 100 hours per year each of non-emergency operation (with actual times expected to be lower), and firing a fuel that is inherently low in sulfur content (LPG), it is not economically feasible to install add-on controls to reduce SO<sub>2</sub> emissions from Generators #4 and #5. SVM proposes BACT for SO<sub>2</sub> to be firing LPG fuel in Generators #4 and #5 and a limit of 0.01 lb/hr.

c. Nitrogen Oxides (NO<sub>x</sub>)

Controls technologically feasible to reduce NO<sub>x</sub> emissions from LPG-fired engines of similar size and age include Non-Selective Catalytic Reduction (NSCR) and proper combustion controls. For generators limited to 100 hours of non-emergency operation per year, with actual operating time expected to be lower, NSCR would not provide a significant environmental benefit. SVH proposes to utilize good combustion controls and meet emission rates based on the emission factors found in U.S. EPA's AP-42, Chapter 3, Table 3.2-3, *Uncontrolled Emission Factors for 4-Stroke Rich-Burn Engines*. Generator #4 shall be limited to a NO<sub>x</sub> emission rate of 2.45 lb/hr, and Generator #5 shall be limited to 2.25 lb/hr.

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

CO and VOC emissions from LPG-fired engines of similar size and age are generally controlled through the use of proper operation and maintenance practices. SVH proposes as BACT for CO and VOC proper operation and maintenance practices to meet the emission limits that are based on emission factors found in EPA's AP-42, Chapter 3, Table 3.2-3, *Uncontrolled Emission Factors for 4-Stroke Rich-Burn Engines*. Generator #4 shall be limited to 4.13 lb/hr of CO and 0.033 lb/hr of VOC. Generator #5 shall be limited to and 3.79 lb/hr of CO and 0.031 lb/hr of VOC.

The BACT emission limits for Generators #4 and #5 firing LPG are based on the following:

PM/PM <sub>10</sub>	- 0.0095 lb/MMBtu, from AP-42, Table 3.2-3 dated 07/00
SO <sub>2</sub>	- 0.00059 lb/MMBtu, from AP-42, Table 3.2-3 dated 07/00
NO <sub>x</sub>	- 2.21 lb/MMBtu, from AP-42, Table 3.2-3 dated 07/00
CO	- 3.72 lb/MMBtu, from AP-42, Table 3.2-3 dated 07/00
VOC	- 0.03 lb/MMBtu, from AP-42, Table 3.2-3 dated 07/00
Visible Emissions	- 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Generators #4 and #5 are the following:

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #4 1.1 MMBtu/hr LPG	0.01	0.01	0.01	2.45	4.13	0.03
Generator #5 1.0 MMBtu/hr LPG	0.01	0.01	0.01	2.25	3.79	0.03

Visible emissions from Generators #4 and #5 each shall not exceed 10% opacity on a six-minute block average basis.

### 3. New Source Performance Standards (NSPS)

Due to the date of manufacture of Generator #3, the engine 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]

Due to the dates of manufacture of Generators #4 and #5, these engines are not subject to the New Source Performance Standards (NSPS) *Standards of Performance for Spark Ignition Internal Combustion Engines (SI ICE)*, 40 C.F.R. Part 60, Subpart JJJJ since the units were manufactured prior to January 1, 2009. [40 C.F.R. § 60.4230]

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 Generators #3, #4 or #5. 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 40 C.F.R. Part 63, Subpart ZZZZ since they are categorized as institutional emergency engines and they do not operate or are 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 the emergency engines by SVH 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(s) to be subject to 40 C.F.R. Part 63, Subpart ZZZZ and require compliance with all applicable requirements.

5. Requirements for Generators #3, #4 and #5

Generators #3, #4 and #5 shall each 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, SVH shall keep records of the individual events indicating when the emergency generators were run, including a description that details why they were run. The records shall also include the total hours of operation of each emergency generator for the calendar year and the hours of emergency operation for each unit during that calendar year.

Generators #3, #4 and #5 shall only be operated for readiness testing, maintenance purposes, and for situations arising from sudden and reasonably unforeseeable events beyond the control of SVH. Generators #3, #4 and #5 shall not to be used for prime power when reliable offsite power is available; nor shall they operate or be 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.

D. Post -2006 Emergency Engines - Generators #1 and #2

SVH operates Generators #1 and #2 as emergency generators, each having been manufactured in 2013. Generators #1 and #2 both are driven by engines having a maximum rated heat input of 2.4 MMBtu/hr, and both engines fire distillate fuel.

SVH is licensing its on-site generators for emergency use operations, specifically for when grid power is unavailable or otherwise unreliable. As such, SVH has accepted a restriction on the annual non-emergency operating times (readiness testing, maintenance, etc.) for Generators #1 and #2 of 100 hours for each engine.

1. BACT Findings

a. Particulate Emissions (PM, PM<sub>10</sub>)

Particulate matter from distillate fuel-fired engines are generally controlled through proper operation and maintenance. The engines for Generators #1 and #2 are both certified to meet EPA Tier 3 emission standards. SVH proposes that the emissions control technology that is already incorporated into these engines' designs to meet Tier 3 standards, along with the proper operation and maintenance of the units and their emissions control devices, represents BACT for PM and PM<sub>10</sub> emissions from Generators #1 and #2. SVH shall ensure that the PM and PM<sub>10</sub> emission rates from Generators #1 and #2 do not exceed 0.09 lb/hr per generator, derived by using the emission factor for PM provided by the manufacturer.

b. Sulfur Dioxide (SO<sub>2</sub>)

SVH has proposed BACT for controlling SO<sub>2</sub> emissions from Generators #1 and #2 to be the use of distillate fuel having a maximum allowable sulfur content of 0.0015% by weight. Based on Generators #1 and #2's maximum fuel firing rate of 17.2 gallons per hour each, the resulting maximum SO<sub>2</sub> emission rate would be 0.0036 lb/hr per generator.

c. Nitrogen Oxides (NO<sub>x</sub>)

The engines for Generators #1 and #2 are both certified to meet EPA Tier 3 emission standards. The emissions control technology that is incorporated into these engines' designs to meet Tier 3 standards represents BACT for NO<sub>x</sub> emissions from Generators #1 and #2. SVH proposes to meet BACT for NO<sub>x</sub> emissions by ensuring that the emissions control devices on Generators #1 and #2 are being operated and properly maintained, and shall ensure that NO<sub>x</sub> emission rates do not exceed 2.43 lb/hr per generator, derived by using the NO<sub>x</sub> emission factor provided by the engine manufacturer.

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

The engines for Generators #1 and #2 are both certified to meet EPA Tier 3 emission standards. The emissions control technology that is incorporated into these engines' designs to meet Tier 3 standards represents BACT for CO and VOC emissions from Generators #1 and #2. SVH proposes that the emissions control technology that is already incorporated into these engines' designs, along with the proper operation and maintenance of the units and their emissions control devices, represents BACT for CO and VOC emissions from Generators #1 and #2. SVH shall ensure that the emission rates from Generators #1 and #2 do not exceed 0.57 lb/hr of CO per generator, and 0.064 lb/hr of VOC per generator.

The BACT emission limits for Generators #1 and #2 are based on the following:

PM/PM <sub>10</sub>	- 0.14 g/kWh, from Engine Manufacturer Emissions Data
SO <sub>2</sub>	- combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO <sub>x</sub>	- 3.8 g/kWh, from Engine Manufacturer Emissions Data
CO	- 0.9 g/kWh, from Engine Manufacturer Emissions Data
VOC	- 0.1 g/kWh, from Engine Manufacturer Emissions Data
Visible Emissions	- 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Generators #1 and #2 are the following:

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1 2.4 MMBtu/hr Distillate Fuel	0.09	0.09	0.01	2.43	0.57	0.06
Generator #2 2.4 MMBtu/hr Distillate Fuel	0.09	0.09	0.01	2.43	0.57	0.06

Visible emissions from each of the distillate fuel-fired generators shall not exceed 10% opacity on a six-minute block average basis.



6. 40 C.F.R. Part 60, Subpart IIII

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

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

a. Emergency Engine Designation and Operating Criteria

Under 40 C.F.R. Part 60, Subpart IIII, a stationary reciprocating internal combustion engine (ICE) is considered an **emergency** stationary ICE (emergency engine) as long as the engine is operated in accordance with the following criteria. Operation of an engine outside of the criteria specified below may cause the engine to no longer be considered an emergency engine under 40 C.F.R. Part 60, Subpart IIII, resulting in the engine being subject to requirements applicable to **non-emergency** engines.

(1) Emergency Situation Operation (On-Site)

**There is no operating time limit on the use of an emergency engine to provide electrical power or mechanical work during an emergency situation.** Examples of use of an emergency engine during emergency situations include the following:

- Use of an engine to produce power for critical networks or equipment (including power supplied to portions of a facility) because of failure or interruption of electric power from the local utility (or the normal power source, if the facility runs on its own power production);
- Use of an engine to mitigate an on-site disaster or equipment failure;
- Use of an engine to pump water in the case of fire, flood, natural disaster, or severe weather conditions; and
- Similar instances.

(2) Non-Emergency Situation Operation

An emergency engine may be operated up to a maximum of 100 hours per calendar year for maintenance checks, readiness testing, and other non-emergency situations as described below.

- (i) An emergency engine may be operated for a maximum of 100 hours per calendar year for 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 more than 100 hours per calendar year.
- (ii) An emergency engine may be operated for up to 50 hours per calendar year for other non-emergency situations. **However, these operating hours are counted as part of the 100 hours per calendar year operating limit described in paragraph (2) and (2) (i) above.**

The 50 hours per calendar year operating limit for other non-emergency situations cannot be used for peak shaving, 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.

[40 C.F.R. §§ 60.4211(f) and 60.4219]

b. 40 C.F.R. Part 60, Subpart III Requirements

(1) Manufacturer Certification Requirement

The engines 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)]

(2) Ultra-Low Sulfur Fuel Requirement

The fuel fired in the engines 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 C.F.R. § 60.4207(b)]

(3) Non-Resettable Hour Meter Requirement

A non-resettable hour meter shall be installed and operated on each engine.

[40 C.F.R. § 60.4209(a)]

(4) Operation and Maintenance Requirements

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

(5) Annual Time Limit for Maintenance and Testing

As emergency engines, the units shall each be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, 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). [40 C.F.R. § 60.4211(f)]

(6) 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)]

(7) Recordkeeping

SVH 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 number of hours each unit operated for emergency purposes, the number of hours each unit operated for non-emergency purposes, and the reason each engine was in operation during each time. [40 C.F.R. § 60.4214(b)]

E. Fugitive Emissions

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity, except for no more than five minutes in any one-hour period during which time visible emissions shall not exceed 30% opacity. Compliance shall be determined by an aggregate of the individual fifteen-second opacity observations which exceed 20% in any one hour.

F. General Process Emissions

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

G. Annual Emissions

1. Total Annual Emissions

SVH shall be restricted to the following annual emissions, based on a calendar year total. The tons per year limits were calculated based on 8,760 hours per year of operation for each boiler and 100 hours per year of non-emergency operation for each emergency generator.

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

	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>VOC</b>
Boiler #1	1.17	1.17	0.02	3.44	1.03	0.04
Boiler #2	1.17	1.17	0.02	3.44	1.03	0.04
Boiler #3	1.17	1.17	0.02	3.44	1.03	0.04
Generator #1	0.01	0.01	negl.	0.12	0.03	0.01
Generator #2	0.01	0.01	negl.	0.12	0.03	0.01
Generator #3	0.02	0.02	negl.	0.08	0.04	0.02
Generator #4	0.01	0.01	negl.	0.12	0.21	0.01
Generator #5	0.01	0.01	negl.	0.11	0.19	0.01
<b>Total TPY</b>	<b>3.6</b>	<b>3.6</b>	<b>0.1</b>	<b>10.9</b>	<b>3.6</b>	<b>0.2</b>

<b>Pollutant</b>	<b>Tons/year</b>
Single HAP	9.9
Total HAP	24.9

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 C.F.R. Part 52, Subpart A, § 52.21, *Prevention of Significant Deterioration of Air Quality* rule. Greenhouse gases, as defined in 06-096 C.M.R. ch. 100, 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 (CO<sub>2</sub>e).

The quantity of CO<sub>2</sub>e emissions from this facility is less than 100,000 tons per year, based on the following:

- the facility's operating hour limitations on the emergency generators;
- worst case emission factors from the following sources: U.S. EPA's AP-42, the Intergovernmental Panel on Climate Change (IPCC), and *Mandatory Greenhouse Gas Reporting*, 40 C.F.R. Part 98; and
- global warming potentials contained in 40 C.F.R. Part 98.

No additional licensing actions to address GHG emissions are required at this time.

### 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:

<b>Pollutant</b>	<b>Tons/Year</b>
PM <sub>10</sub>	25
SO <sub>2</sub>	50
NO <sub>x</sub>	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-1136-71-A-N 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 commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 C.M.R. ch. 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 C.M.R. ch. 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 C.M.R. ch. 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S. § 353-A. [06-096 C.M.R. ch. 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 C.M.R. ch. 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 C.M.R. ch. 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 C.M.R. ch. 115]

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

- B. The days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
- C. The licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.  
[06-096 C.M.R. ch. 115]
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 C.M.R. ch. 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 C.M.R. ch. 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.  
[06-096 C.M.R. ch. 115]



**SPECIFIC CONDITIONS**

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

**A. Fuel**

1. Beginning July 1, 2018, SVH 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, BACT]
2. Compliance shall be demonstrated by fuel records from the supplier showing the quantity and the percent sulfur of the fuel delivered. Records of fuel use shall be kept on a monthly and calendar year total basis. [06-096 C.M.R. ch. 115, BACT]

**B. Emissions shall not exceed the following:**

<b>Emission Unit</b>	<b>Pollutant</b>	<b>lb/MMBtu</b>	<b>Origin and Authority</b>
Boiler #1, #2 and #3	PM	0.08	06-096 C.M.R. ch. 115, BACT

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

<b>Emission Unit</b>	<b>PM (lb/hr)</b>	<b>PM<sub>10</sub> (lb/hr)</b>	<b>SO<sub>2</sub> (lb/hr)</b>	<b>NO<sub>x</sub> (lb/hr)</b>	<b>CO (lb/hr)</b>	<b>VOC (lb/hr)</b>
Boiler #1	0.27	0.27	0.01	0.79	0.23	0.01
Boiler #2	0.27	0.27	0.01	0.79	0.23	0.01
Boiler #3	0.27	0.27	0.01	0.79	0.23	0.01

**D. Visible emissions from the common stack for the boilers shall not exceed an opacity of 30 percent on a six (6) minute block average basis. [06-096 C.M.R. ch. 115, BACT]**

**E. SVH shall document the type and sulfur content of the fuel used in Boilers #1, #2 and #3 through the use of fuel delivery receipts. [06-096 C.M.R. ch. 115, BACT]**

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

1. An Initial Notification submittal to EPA is due within 120 days after the source becomes subject to the standard. [40 C.F.R. § 63.11225(a)(2)]
2. The facility shall implement a boiler tune-up program. [40 C.F.R. § 63.11223]

- a. Boilers #1, #2 and #3 shall each undergo a tune-up at least once every five (5) years, based on their sizes, ages, and operations.  
[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 for up to 72 months from the previous inspection. [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 for up to 72 months from the previous inspection. [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, if requested, submitted to EPA. 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)]

### Compliance Report

A compliance report shall be prepared by March 1<sup>st</sup> every five years which covers the previous five calendar years. The report shall be maintained by the source and submitted to the Department and/or to the EPA upon request. The report must include the items contained in §§ 63.11225(b)(1) and (2), including the following: [40 C.F.R. § 63.11225(b)]

- 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. Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart JJJJJ including the following [40 C.F.R. § 63.11225(c)]:
- a. Copies of notifications and reports with supporting compliance documentation;
  - b. Identification of each boiler, the date of tune-up, procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned;
  - c. Records of the occurrence and duration of each malfunction of each applicable boiler; and
  - d. Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler.

Records shall be in a form suitable and readily available for expeditious review.

[40 C.F.R. § 63.11225(a)(4)(vi)]

(17) ***Pre-2006 Emergency Engines - Generators #3, #4 and #5***

- 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 C.M.R. ch. 115, BACT]
- B. Each emergency generator shall be equipped with a non-resettable hour-meter to record operating time. [06-096 C.M.R. ch. 115, BACT]
- C. SVH shall keep records that include maintenance conducted on the engines and the hours of operation of each engine recorded through its 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, BACT]
- D. The fuel sulfur content for distillate fuel-fired Generator #3 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 C.M.R. ch. 115, BACT]
- E. Generators #4 and #5 shall be limited to only firing LPG. [06-096 C.M.R. ch. 115, BACT]
- F. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BACT]:

<b>Unit</b>	<b>PM (lb/hr)</b>	<b>PM<sub>10</sub> (lb/hr)</b>	<b>SO<sub>2</sub> (lb/hr)</b>	<b>NO<sub>x</sub> (lb/hr)</b>	<b>CO (lb/hr)</b>	<b>VOC (lb/hr)</b>
Generator #3 1.6 MMBtu/hr Distillate Fuel	0.39	0.39	0.01	1.52	0.88	0.30
Generator #4 1.6 MMBtu/hr Liquefied Petroleum Gas	0.01	0.01	0.01	2.45	4.13	0.03
Generator #5 1.6 MMBtu/hr Liquefied Petroleum Gas	0.01	0.01	0.01	2.25	3.79	0.03

G. Visible Emissions

- 1. Visible emissions from Generator #3 shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]
- 2. Visible emissions from Generators #4 and #5 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

H. Emergency generators and/or fire pumps are only to be operated for readiness testing, 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.

(18) **Post-2006 Emergency Engines - Generators #1 and #2**

A. Emergency Generators #1 and #2 shall each 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. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BACT]:

<b>Unit</b>	<b>PM (lb/hr)</b>	<b>PM<sub>10</sub> (lb/hr)</b>	<b>SO<sub>2</sub> (lb/hr)</b>	<b>NO<sub>x</sub> (lb/hr)</b>	<b>CO (lb/hr)</b>	<b>VOC (lb/hr)</b>
Generator #1 2.4 MMBtu/hr Distillate Fuel	0.09	0.09	0.01	2.43	0.57	0.06
Generator #2 2.4 MMBtu/hr Distillate Fuel	0.09	0.09	0.01	2.43	0.57	0.06

C. Visible Emissions from each of the distillate fuel-fired generators shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

D. Generators #1 and #2 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, BACT]

1. **Manufacturer Certification**

The engines 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 engines 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 C.F.R. § 60.4207(b) and 06-096 C.M.R. ch. 115]

3. Non-Resettable Hour Meter

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

4. Annual Time Limit for Maintenance and Testing

a. As emergency engines, the units shall each be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, 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). These limits are based on a calendar year. Compliance shall be demonstrated by records (electronic or written log) of all engine operating hours. [40 C.F.R. § 60.4211(f) and 06-096 C.M.R. ch. 115]

b. SVH shall keep records that include maintenance conducted on each engine and the hours of operation of each 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 each engine was in operation during each time. [40 C.F.R. § 60.4214(b)]

5. Operation and Maintenance

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

(19) **Fugitive Emissions**

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity, except for no more than five minutes in any one-hour period during which time visible emissions shall not exceed 30% opacity. Compliance shall be determined by an aggregate of the individual fifteen-second opacity observations which exceed 20% in any one hour. [06-096 C.M.R. ch. 115, BACT]

(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. 115, BACT]

(21) SVH shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S. § 605).

DONE AND DATED IN AUGUSTA, MAINE THIS 27 DAY OF September, 2018.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Paul Allen Robert Cove for  
PAUL MERCER, 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: June 28, 2018

Date of application acceptance: July 9, 2018

Date filed with the Board of Environmental Protection:

This Order prepared by Patric J. Sherman, Bureau of Air Quality.

