



DEPARTMENT ORDER

**Sugarloaf Mountain Corporation  
Franklin County  
Carrabassett Valley, Maine  
A-845-71-G-A**

**Departmental  
Findings of Fact and Order  
Air Emission License  
Amendment #2**

**FINDINGS OF FACT**

After review of the air emission license amendment 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

Sugarloaf Mountain Corporation (Sugarloaf) was issued Air Emission License A-845-71-E-R/A on May 30, 2017, for the operation of emission sources associated with their commercial skiing operation and ski lodge. The license was subsequently amended on March 7, 2018 (A-845-71-F-M).

The equipment addressed in this license amendment is located at the Sugarloaf Mountain ski area, 5092 Access Rd., Carrabassett Valley, Maine.

Sugarloaf has requested an amendment to their license in order to add two emergency engines, replace the Baselodge Generator, and remove the Baselodge #1 boiler.

B. Emission Equipment

The following equipment is addressed in this air emission license amendment:

**Stationary Emergency Engines**

<b>Equipment</b>	<b>Max. Input Capacity (MMBtu/hr)</b>	<b>Rated Output Capacity (HP)</b>	<b>Fuel Type</b>	<b>Firing Rate (gal/hr)</b>	<b>Date of Manuf.</b>	<b>Date of Install.</b>
Baselodge Generator	1.3	127	propane	14.3	2019	2020
Bucksaw Express Engine #1	5.5	800	distillate fuel	39.7	2010	2023
Bucksaw Express Engine #2	1.2	165	distillate fuel	8.8	1996	2023

**Equipment Removed From This License**

<b>Equipment</b>	<b>Max. Capacity (MMBtu/hr)</b>	<b>Maximum Firing Rate</b>	<b>Fuel Type</b>	<b>Date of Manuf.</b>	<b>Date of Install.</b>
<i>Baselodge #1 Boiler</i>	<i>2.47</i>	<i>17.6</i>	<i>distillate fuel</i>	<i>1984</i>	<i>1984</i>
<i>Baselodge Generator</i>	<i>0.61</i>	<i>6.5</i>	<i>propane</i>	<i>1999</i>	<i>1999</i>

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 modification of a minor source is considered a major or minor modification based on whether or not expected emission increases exceed the “Significant Emission” levels as defined in the Department’s *Definitions Regulation*, 06-096 Code of Maine Rules (C.M.R.) ch. 100. The emission increases are determined by subtracting the current licensed annual emissions preceding the modification from the maximum future licensed annual emissions, as follows:

<b>Pollutant</b>	<b>Current License (tpy)</b>	<b>Future License (tpy)</b>	<b>Net Change (tpy)</b>	<b>Significant Emission Levels</b>
PM	1.9	1.1	-0.8	100
PM <sub>10</sub>	1.9	1.1	-0.8	100
PM <sub>2.5</sub>	1.9	1.1	-0.8	100
SO <sub>2</sub>	10.5	5.1	-5.4	100
NO <sub>x</sub>	5.9	5.6	-0.3	100
CO	1.5	1.6	0.1	100
VOC	0.2	0.3	0.1	100

This modification is determined to be a minor modification and has been processed as such.

E. Facility Classification

With the annual operating hours restriction on the emergency engines, the facility is licensed as follows:

- As a synthetic minor source of air emissions for NO<sub>x</sub>, because Sugarloaf is subject to license restrictions that keep facility emissions below 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 *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.

B. Emergency Engines

Sugarloaf is adding two new emergency engines to its facility and replacing the previously licensed Baselodge Generator. The Baselodge Generator and Bucksaw Express Engine #1 are both emergency generators with each gen set consisting of an engine and an electrical generator. The Bucksaw Express Engine #2 is a redundant emergency source of mechanical power for the Bucksaw Express Chairlift which can be used to operate the chairlift should primary power and the Bucksaw Express Engine #1 emergency generator both fail. The emergency engines have engines rated at 1.3 MMBtu/hr, 5.5 MMBtu/hr, and 1.2 MMBtu/hr with the Baselodge Generator firing propane and the remaining units firing distillate fuel. The emergency engines were manufactured in 2019, 2010, 1996, respectively.

1. BACT Findings

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

Baselodge Generator

- PM/PM<sub>10</sub>/PM<sub>2.5</sub> – 0.05 lb/MMBtu 06-096 C.M.R. ch. 115, BACT
- SO<sub>2</sub> – 0.000588 lb/MMBtu from AP-42 Table 3.2-3, dated 7/00
- NO<sub>x</sub> – 2.27 lb/MMBtu from AP-42 Table 3.2-3, dated 7/00
- CO – 3.51 lb/MMBtu from AP-42 Table 3.2-3, dated 7/00
- VOC – 0.03 lb/MMBtu from AP-42 Table 3.2-3, dated 7/00
- Visible Emissions – 06-096 C.M.R. ch. 115, BACT

Bucksaw Express Engine #1

- PM/PM<sub>10</sub>/PM<sub>2.5</sub> – 0.12 b/MMBtu from 06-096 C.M.R. ch. 115, BACT
- 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> – 3.2 lb/MMBtu from AP-42 Table 3.4-1, dated 10/96
- CO – 0.85 lb/MMBtu from AP-42 Table 3.4-1, dated 10/96
- VOC – 0.09 lb/MMBtu from AP-42 Table 3.4-1, dated 10/96
- Visible Emissions – 06-096 C.M.R. ch. 115, BACT

Bucksaw Express Engine #2

- PM/PM<sub>10</sub>/PM<sub>2.5</sub> – 0.12 b/MMBtu from 06-096 C.M.R. ch. 115, BACT
- 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> – 4.41 lb/MMBtu from AP-42 Table 3.3-1, dated 10/96
- CO – 0.95 lb/MMBtu from AP-42 Table 3.3-1, dated 10/96
- VOC – 0.35 lb/MMBtu from AP-42 Table 3.3-1, dated 10/96
- Visible Emissions – 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for the generators are the following:

Unit	Pollutant	lb/MMBtu
Bucksaw Express Engine #1	PM	0.12

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	PM <sub>2.5</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Baselodge Generator	0.07	0.07	0.07	0.01	2.96	4.57	0.04
Bucksaw Express Engine #1	0.66	0.66	0.66	0.01	17.60	4.68	0.50
Bucksaw Express Engine #2	0.15	0.15	0.15	0.01	5.30	1.14	0.42

Visible emissions from the Bucksaw Express Engines #1 and #2 shall each not exceed 20% opacity on a six-minute block average basis.

Visible emissions from the Baselodge Generator shall not exceed 10% opacity on a six-minute block average basis.

Bucksaw Express Engine #2 shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. There is no limit on emergency operation. Bucksaw Express Engine #2 shall be equipped with a non-resettable hour-meter to record operating time. To demonstrate compliance with the operating hours limit, Sugarloaf shall keep records of the total hours of operation and the hours of emergency operation for each unit.

The Bucksaw Express Engine #2 is only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. The Bucksaw Express Engine #2 is not to be used 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

*Stationary Generators*, 06-096 C.M.R. ch. 169 (Chapter 169), is applicable to the Baselodge Generator and Bucksaw Express Engine #1. They are emergency generators powered by engines 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.

For the Baselodge Generator and Bucksaw Express Engine #1, Sugarloaf 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)]

3. New Source Performance Standard, Subpart JJJJ

*Standards of Performance for Spark Ignition Internal Combustion Engines*, 40 C.F.R. Part 60, Subpart JJJJ is applicable to the Baselodge Generator since the unit was ordered after June 12, 2006, and manufactured after January 1, 2009. [40 C.F.R. § 60.4230]

By meeting the requirements of 40 C.F.R. Part 60, Subpart JJJJ, the unit also meets the requirements found in the *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 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 JJJJ requirements is listed below.

a. Emergency Engine Designation and Operating Criteria

Under 40 C.F.R. Part 60, Subpart JJJJ, 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 JJJJ, 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;
- 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. §§ 60.4243(d) and 60.4248]

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

(1) Manufacturer Certification Requirement

The engine shall be certified by the manufacturer as meeting the emission standards for new nonroad spark ignition engines found in 40 C.F.R. Part 60, Subpart JJJJ, Table 1. [40 C.F.R. § 60.4233]

(2) Non-Resettable Hour Meter Requirement

A non-resettable hour meter shall be installed and operated on the engine. [40 C.F.R. § 60.4237]

(3) Operation and Maintenance Requirement

The engine shall be operated and maintained according to the manufacturer's written instructions or procedures developed by Sugarloaf that are approved by the engine manufacturer. Sugarloaf may only change those settings that are permitted by the manufacturer. [40 C.F.R. § 60.4243]

(4) Annual Time Limit for Maintenance and Testing

As an emergency engine, the unit shall be limited to 100 hours/year for maintenance and testing. The emergency engine may operate up to 50 hours per year in non-emergency situations, but those 50 hours are included in the

100 hours total allowed for maintenance and testing. The 50 hours for non-emergency use cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 C.F.R. § 60.4243(d)]

(5) Recordkeeping

Sugarloaf 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 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. § 60.4245(b)]

4. New Source Performance Standard, Subpart IIII

*Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, 40 C.F.R. Part 60, Subpart IIII is applicable to the Bucksaw Express Engine #1 since the unit was 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 unit also meets 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)]

Due to its date of manufacture, the Bucksaw Express Engine #2 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]

A summary of the federal 40 C.F.R. Part 60, Subpart IIII requirements currently applicable to Bucksaw Express Engine #1 are 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;
- 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.

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

(1) Manufacturer Certification Requirement

The 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)]

(2) Ultra-Low Sulfur Fuel Requirement

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

(3) Non-Resettable Hour Meter Requirement

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

(4) Operation and Maintenance Requirements

The engine shall be operated and maintained according to the manufacturer's emission-related written instructions. Sugarloaf 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 an emergency engine, the unit shall 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

Sugarloaf 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)]

5. 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 Bucksaw Express Engine #2. 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 commercial 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.

C. 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 all emergency engines for 100 hrs/yr each; and
- Operating the boiler for 8,760 hr/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 <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Baselodge Boiler #2	0.81	0.81	0.81	5.06	1.45	0.36	0.02
Super Quad Engine #1	0.04	0.04	0.04	--	1.01	0.27	0.03
Super Quad Engine #2	0.02	0.02	0.02	--	0.27	0.06	0.02
Whiffle Tree Engine #1	0.03	0.03	0.03	--	0.37	0.08	0.03

	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Skyline APU Engine #1	0.04	0.04	0.04	--	0.62	0.13	0.05
Skyline APU Engine #2	0.03	0.03	0.03	--	0.37	0.08	0.03
King Pine Engine #1	0.01	0.01	0.01	--	0.15	0.03	0.01
Baselodge Generator	0.01	0.01	0.01	0.01	0.15	0.23	0.01
Bucksaw Express Engine #1	0.04	0.04	0.04	0.01	0.88	0.24	0.03
Bucksaw Express Engine #2	0.01	0.01	0.01	0.01	0.27	0.06	0.03
<b>Total TPY</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>5.1</b>	<b>5.6</b>	<b>1.6</b>	<b>0.3</b>

Pollutant	Tons/year
Single HAP	9.9
Total HAP	24.9

### 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 <sub>10</sub>	25
PM <sub>2.5</sub>	15
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 amendment.

This determination is based on information provided by the applicant regarding the expected construction and operation of the proposed 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 Sugarloaf 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 Amendment A-845-71-G-A subject to the conditions found in Air Emission License A-845-71-E-R/A, in amendment A-845-71-F-A, and the following conditions.

Severability. The invalidity or unenforceability of any provision of this License Amendment or part thereof shall not affect the remainder of the provision or any other provisions. This License Amendment shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

**SPECIFIC CONDITIONS**

**The following shall replace Specific Conditions (16) and (17) of Air Emission License A-845-71-E-R/A.**

**(16) Baselodge Boiler #2**

A. Fuel

1. The facility 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]
2. Fuel sulfur content compliance shall be demonstrated by fuel delivery receipts from the supplier, certificate of analysis, or testing of the tank containing the fuel to be fired. [06-096 C.M.R. ch. 115, BPT]

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

<b>Emission Unit</b>	<b>PM (lb/hr)</b>	<b>PM<sub>10</sub> (lb/hr)</b>	<b>PM<sub>2.5</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>
Baselodge #2	0.18	0.18	0.18	1.16	0.33	0.08	0.01

C. Visible emissions from the boiler shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

D. Sugarloaf shall comply with all requirements of 40 C.F.R. Part 63, Subpart JJJJJ applicable to Baseload Boiler #2 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
Oil fired boilers with a heat input capacity of $\leq 5$ MMBtu/hr	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 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 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

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. 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: Compliance with the records retention requirement of six years as stated in Standard Condition (8) of this license supersedes this Subpart JJJJJ requirement.

EPA requires submission of Notification of Compliance Status reports for tune-ups and energy assessments through their electronic reporting system. [40 C.F.R. § 63.11225(a)(4)(vi)]

(17) **Generators**

- A. Each of the emergency engines 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 and BACT]
- B. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Super Quad Engine #1	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)
Bucksaw Express Engine #1	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)

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

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	PM <sub>2.5</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Super Quad Engine #1	0.76	0.76	0.76	0.01	20.19	5.36	0.57
Super Quad Engine #2	0.38	0.38	0.38	Neg.	5.47	1.18	0.45
Whiffle Tree Engine #1	0.52	0.52	0.52	Neg.	7.41	1.60	0.60
Skyline APU Engine #1	0.87	0.87	0.87	Neg.	12.39	2.67	1.01
Skyline APU Engine #2	0.52	0.52	0.52	Neg.	7.41	1.60	0.60
King Pine Engine #1	0.22	0.22	0.22	Neg.	3.09	0.67	0.25
Baselodge Generator	0.07	0.07	0.07	0.01	2.96	4.57	0.04



<b>Unit</b>	<b>PM (lb/hr)</b>	<b>PM<sub>10</sub> (lb/hr)</b>	<b>PM<sub>2.5</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>
Bucksaw Express Engine #1	0.66	0.66	0.66	0.01	17.60	4.68	0.50
Bucksaw Express Engine #2	0.15	0.15	0.15	0.01	5.30	1.14	0.42

**D. Visible Emissions**

Visible emissions from each of the distillate fuel fired engines shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT and BACT]

Visible emissions from the Baseload Generator shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

**E. Sugarloaf shall meet the following requirements for the Super Quad Engine #1, Super Quad Engine #2, Whiffle Tree Engine #1, Skyline APU Engine #2, and Bucksaw Express Engine #2.**

1. Sugarloaf 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 the engine was in operation during each time. [06-096 C.M.R. ch. 115, BPT and BACT]

2. The fuel sulfur content for the above listed engines 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 tank containing the fuel to be fired. [06-096 C.M.R. ch. 115, BPT and BACT]

3. The above listed emergency engines 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 engines 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 and BACT]

**F. The Skyline APU Engine #1, King Pine Engine #1, and Bucksaw Express Engine #1 shall all meet the applicable requirements of 40 C.F.R. Part 60, Subpart IIII, including the following: [incorporated under 06-096 C.M.R. ch. 115, BPT and 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 by weight). 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 tank containing the fuel to be fired. [40 C.F.R. § 60.4207(b) and 06-096 C.M.R. ch. 115, BPT]
  3. **Non-Resetable 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, BPT]
    - b. Sugarloaf shall keep records that include 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.
  5. **Operation and Maintenance**  
The engines shall be operated and maintained according to the manufacturer's emission-related written instructions. Sugarloaf may only change those emission-related settings that are permitted by the manufacturer. [40 C.F.R. § 60.4211(a)]
- G. The Baselodge Generator shall meet the applicable requirements of 40 C.F.R. Part 60, Subpart JJJJ, including the following:  
[incorporated under 06-096 C.M.R. ch. 115, BACT]

1. **Manufacturer Certification**

The engine shall be certified by the manufacturer as meeting the emission standards for new nonroad spark ignition engines found in 40 C.F.R. Part 60, Subpart JJJJ, Table 1.

2. **Non-Resettable Hour Meter**

A non-resettable hour meter shall be installed and operated on the engine. [40 C.F.R. § 60.4237 and 06-096 C.M.R. ch. 115, BPT]

3. **Annual Time Limit for Maintenance and Testing**

a. As an emergency engine, the unit shall 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). The 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. § 60.4243(d) and 06-096 C.M.R. ch. 115, BPT]

b. Sugarloaf 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 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.

4. **Operation and Maintenance**

The engine shall be operated and maintained according to the manufacturer's written instructions or procedures developed by Sugarloaf that are approved by the engine manufacturer. Sugarloaf may only change those settings that are permitted by the manufacturer. [40 C.F.R. § 60.4243]

The following is a new Specific Condition of Air Emission License A-845-71-E-R/A.

- (20) If the Department determines that any parameter value pertaining to construction and operation of the proposed 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, Sugarloaf may be required to submit additional information. Upon written request from the Department, Sugarloaf shall provide information necessary to demonstrate ambient air quality standards (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)]

DONE AND DATED IN AUGUSTA, MAINE THIS 16<sup>th</sup> DAY OF MAY, 2023.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:  for  
MELANIE LOYZIM, COMMISSIONER

**The term of this amendment shall be concurrent with the term of Air Emission License A-845-71-E-R/A.**

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 4/6/23

Date of application acceptance: 4/11/23

Date filed with the Board of Environmental Protection:

This Order prepared by Chris Ham, Bureau of Air Quality.

