



DEPARTMENT ORDER

**City of Augusta – Hatch Hill Landfill  
Kennebec County  
Augusta, Maine  
A-1060-71-H-A**

**Departmental  
Findings of Fact and Order  
Air Emission License  
Amendment #3**

**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

The City of Augusta – Hatch Hill Landfill (Hatch Hill) was issued Air Emission License A-1060-71-E-R on April 18, 2017, for the operation of emission sources associated with their landfill facility. The license was subsequently amended on February 9, 2019 (A-1060-71-F-A), and on August 23, 2018 (A-1060-71-G-A).

Hatch Hill has requested an amendment to their license in order to install one new backup emergency generator.

The equipment addressed in this license amendment is located at 112 Hatch Hill Road, Augusta, Maine.

B. Emission Equipment

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

**Stationary Engines**

<b>Equipment</b>	<b>Max. Input Capacity (MMBtu/hr)</b>	<b>Rated Output Capacity (kW)</b>	<b>Fuel Type, % sulfur</b>	<b>Firing Rate (gal/hr)</b>	<b>Date of Manuf.</b>	<b>Date of Install.</b>
Emergency Generator	1.7	52	Distillate Fuel, 0.0015%	12.2	2019	2020

Hatch Hill 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, Hatch Hill 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 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.

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:

Pollutant	Current License (TPY)	Future License (TPY)	Net Change (TPY)	Significant Emission Levels
PM	3.5	3.6	0.1	100
PM <sub>10</sub>	3.5	3.6	0.1	100
SO <sub>2</sub>	3.9	3.9	--	100
NO <sub>x</sub>	16.1	16.2	0.1	100
CO	58.7	58.8	0.1	100
VOC	12.4	12.5	0.1	50

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

E. Facility Classification

The facility is licensed as follows:

- As a natural minor source of air emissions, because no license restrictions are necessary to 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 Generator

Hatch Hill is installing one new emergency generator, consisting of an engine and an electrical generator. The Emergency Generator was manufactured in 2019, fires distillate fuel, and has an engine with a maximum heat input rating of 1.7 MMBtu/hr that is certified to meet the EPA Tier 3 emission standards.

1. BACT Findings

The BACT emission limits for the Emergency Generator are based on the following:

PM/PM <sub>10</sub>	- 0.40 g/kW-hr, from 40 CFR 60 Subpart III, CFR §89.112, Table 1
SO <sub>2</sub>	- 0.00151 lb/MMBtu, mass balance calculation based on firing ultra-low sulfur distillate fuel (0.0015% sulfur by weight).
NO <sub>x</sub>	- 4.7 g/kW-hr of Non-Methane Hydrocarbon (NMHC) and NO <sub>x</sub> , from 40 CFR 60 Subpart III, CFR §89.112, Table 1.
CO	- 5.0 g/kW-hr, from 40 CFR 60 Subpart III, CFR §89.112, Table 1
VOC	- 0.36 lb/MMBtu, from AP-42, Table 3.3-1 (dated 10/96)
Visible Emissions	- 06-096 CMR 101

The BACT emission limits for the generator 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)
Emergency Generator	0.06	0.06	0.003	0.66	0.71	0.61

Visible emissions from emergency generator shall not exceed 20% opacity on a six-minute block average basis.

2. 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 engine listed above 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)]

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 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. Hatch Hill 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**  
Hatch Hill 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. § 60.4214(b)]

### **C. Annual Emissions**

Hatch Hill shall be restricted to the following annual emissions, based on a calendar year total. The tons per year limits were calculated based on both the existing flare and LFG-fired Generator #1 firing concurrently with no operating hour restrictions, and operating the new Emergency Generator for 100 hrs/yr.

**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>	<b>HAP</b>
LFG Flare	0.5	0.5	1.3	1.1	21.2	3.7	3.7
Generator #1	3.0	3.0	2.6	15.0	37.5	8.7	1.8
Emergency Generator	0.1	0.1	negl.	0.1	0.1	0.1	--
<b>Total TPY</b>	<b>3.6</b>	<b>3.6</b>	<b>3.9</b>	<b>16.2</b>	<b>58.8</b>	<b>12.5</b>	<b>5.5</b>

### 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 amendment.

### 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-1060-71-H-A subject to the conditions found in Air Emission License A-1060-71-E-R, in amendments A-1060-71-F-A and A-1060-71-G-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 new specific condition shall be added to Air License A-1060-71-E-R (April 18, 2017) for Hatch Hill:

**(23) Emergency Generator**

- A. The Emergency Generator shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 C.M.R. ch. 115, BACT]
  
- B. The Emergency Generator shall fire distillate fuel. [06-096 C.M.R. ch. 115, BACT]
  
- C. 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>
Emergency Generator	0.06	0.06	0.003	0.66	0.71	0.61

**D. Visible Emissions**

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



- E. The Emergency Generator shall 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, BACT]
1. **Manufacturer Certification**  
The engine shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in §60.4202. [40 C.F.R. § 60.4205(b)]
  2. **Ultra-Low Sulfur Fuel**  
The fuel fired in the engine shall not exceed 15 ppm sulfur (0.0015% sulfur). Compliance with the fuel sulfur content limit shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of the tank containing the fuel to be fired. [40 C.F.R. § 60.4207(b) and 06-096 C.M.R. ch. 115, BACT]
  3. **Non-Resettable Hour Meter**  
A non-resettable hour meter shall be installed and operated on the engine. [40 C.F.R. § 60.4209(a)]
  4. **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). 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. Hatch Hill 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. § 60.4214(b)]

**5. Operation and Maintenance**

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

DONE AND DATED IN AUGUSTA, MAINE THIS 16<sup>th</sup> DAY OF APRIL, 2020.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:  for  
GERALD D. REID, COMMISSIONER

**The term of this amendment shall be concurrent with the term of Air Emission License A-1060-71-E-R.**

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: December 5, 2019

Date of application acceptance: December 6, 2019

Date filed with the Board of Environmental Protection:

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

**FILED**  
APR 16, 2020  
State of Maine  
Board of Environmental Protection