STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

Lohmann Animal Health International, Inc. Kennebec County Winslow, Maine A-859-71-K-R	**Departmental Findings of Fact and Order Air Emission License Renewal**

FINDINGS OF FACT

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

I. REGISTRATION

A. Introduction

Lohmann Animal Health International, Inc. (LAHI), a subsidiary of Elanco US Inc., has applied to renew their Air Emission License for the operation of emission sources associated with their poultry vaccine development and manufacturing facility.

The equipment addressed in this license is located at 375 China Road, Winslow, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

External Combustion Sources

Equipment	Max. Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type	Date of Manuf.	Date of Install.	Stack #
Boiler #1	2.5	27.3	Propane	1997	1997	2
Boiler #2	2.5	27.3	Propane	1997	1997	3
BLDG X-AHU1	1.0	10.9	Propane	2016	2016	4

Note: In addition to the two steam boilers and the air handler listed above, LAHI also operates one air handler, two steam boilers, eight water heaters, three heaters, three heat and hot water boilers, and an HVAC unit, which all fire propane. These are considered insignificant emissions units because they are each rated below 1.0 MMBtu/hr, the maximum heat input capacity that would require their inclusion in the license; therefore, this equipment is not addressed further in this license.

Stationary Engines

Equipment	Max. Input Capacity (MMBtu/hr)	Rated Output Capacity (kW)	Fuel Type	Firing Rate (gal/hr)	Date of Manuf.	Date of Install.
Generator #1	6.0	800	Distillate Fuel	44.0	2000	2000
Generator #2	2.0	200	Distillate Fuel	14.9	2023	2023
Generator #3	5.0	500	Distillate Fuel	36.5	2016	2016
Generator #4	1.35	100	Propane	14.7*	2014	2014

* Based on a propane heating value of 91.5 MMBtu per 1,000 gal, per AP-42 Section 1.5.3.1 (dated 07/08).

LAHI 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, LAHI 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.

Incinerator #3

The incinerator is a Shenandoah Model P25-2GM1 with the following specifications:

Class Incinerator	IV-A
No. of Chambers	2
Type of Waste	Type 4
Max. Design (Combustion/Feed) Rate	1,200 pounds/load 45 lb/hr burn rate
Auxiliary Fuel Input: **Primary Chamber (MMBtu/hr)** **Secondary Chamber (MMBtu/hr)**	LPG/propane 0.32 1.2
Emission Control	Afterburner

Chemical Usage

LAHI uses 70% isopropyl alcohol as a disinfectant for laboratory work. Isopropyl alcohol is a VOC but not a HAP.

C. Definitions

Cleaning Activities means the use of solvents to remove contaminants including, but not limited to, adhesives, inks, paint, dirt, soil, oil, and grease from parts, products, tools, machinery, equipment, vessels, and work production related areas for a variety of reasons, including safety, operability, and to avoid product contamination; this includes activities such as wiping, flushing, or spraying. Examples of such activities may include, but are not limited to, the cleaning of spray booths, spray guns, and printing presses.

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.

Industrial Cleaning Solvents means products containing VOC when used for cleaning activities applied to items and surfaces used in manufacturing, processing, mining, and refining or other manufacturing activities.

Records or *Logs* mean either hardcopy or electronic records.

Portable or Non-Road 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.

An engine is not a non-road (portable) engine if it remains or will remain at a location for more than 12 consecutive months or for a shorter period of time if sited at a seasonal source. A seasonal source is a source that remains in a single location for two years or more and which operates for fewer than 12 months in a calendar year. If an engine operates at a seasonal source for one entire season, the engine does not meet the criteria of a non-road (portable) engine and is subject to applicable stationary engine requirements.

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 application for LAHI does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of currently licensed emission units only and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (C.M.R.) ch. 115.

E. Facility Classification

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

- As a synthetic minor source of air emissions for NO_x, because LAHI 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 existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Boilers #1 and #2

LAHI operates Boilers #1 and #2 for steam. The boilers are rated at 2.5 MMBtu/hr each and fire propane. Boilers #1 and #2 were manufactured and installed in 1997 and exhaust through Stack 2 and Stack 3, respectively.

1. BPT Findings

The BPT emission limits for Boilers #1 and #2 were based on the following:

Propane

$PM/PM_{10}/PM_{2.5}$	–	0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
SO_2	–	0.018 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08
NO_x	–	13 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08
CO	–	7.5 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08
VOC	–	1.0 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08
Visible Emissions	–	06-096 C.M.R. ch. 101

The BPT emission limits for Boilers #1 and #2 are the following:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	0.13	0.13	0.13	--	0.36	0.20	0.03
Boiler #2	0.13	0.13	0.13	--	0.36	0.20	0.03

Visible emissions from each stack for Boilers #1 and #2 shall not exceed 10% opacity on a six-minute block average basis.

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

Due to their size, Boilers #1 and #2 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]

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

Boilers #1 and #2 are not subject to the NESHAP requirements of 40 C.F.R. Part 63, Subpart JJJJJJ. Propane-fired boilers are included in the definition of gas-fired boilers in Subpart JJJJJJ. As such, they are exempt from Subpart JJJJJJ requirements. [40 C.F.R. §§ 63.11195(e) and 63.11237]

C. BLDG X-AHU1

LAHI operates air handling unit BLDG X-AHU1 for heat. The air handler is rated at 1.0 MMBtu/hr and fires propane**.** BLDG X-AHU1 was manufactured and installed in 2016 and exhausts through Stack 4. BLDG X-AHU1 does not have any annual fuel limits.

1. BPT Findings

   The BPT emission limits for BLDG X-AHU1were based on the following:

   Propane

$PM/PM_{10}/PM_{2.5}$	–	0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
SO_2	–	0.018 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08
NO_x	–	13 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08
CO	–	7.5 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08
VOC	–	1.0 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08
Visible Emissions	–	06-096 C.M.R. ch. 101

   The BPT emission limits for BLDG X-AHU1 are the following:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
BLDG X-AHU1	0.05	0.05	0.05	--	0.14	0.08	0.01

   Visible emissions from BLDG X-AHU1 shall not exceed 10% opacity on a six-minute block average basis.

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

   Due to the size, BLDG X-AHU1 is 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]

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

   BLDG X-AHU1 is not subject to the NESHAP requirements. Propane-fired boilers are included in the definition of gas-fired boilers in Subpart JJJJJJ. As such, they are exempt from Subpart JJJJJJ requirements. In addition, BLDG X-AHU1 does not meet the definition of "boiler" in this subpart. [40 C.F.R. §§ 63.11195(e) and 63.11237]

D. Emergency Generators #1, #2, and #3

LAHI operates Generators #1, #2, and #3 as emergency generators. The emergency generators are generator sets with each gen set consisting of an engine and an electrical generator. Generators #1, #2, and #3 have engines rated at 6.0 MMBtu/hr, 2.0 MMBtu/hr, and 5.0 MMBtu/hr, respectively, which all fire distillate fuel. Generators #1, #2, and

#3 were manufactured in 2000, 2023, and 2016, respectively. Generator #1 was installed in 2000, Generator #3 was installed in 2016, and Generator #2 has been licensed to be installed in 2023.

1. BPT Findings

The BPT emission limits for Generators #1 and #3 are based on the following:

$PM/PM_{10}/PM_{2.5}$	–	0.12 lb/MMBtu from 06-096 C.M.R. ch. 103
SO_2	–	Combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO_x	–	3.2 lb/MMBtu from AP-42 Table 3.4-1 dated 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, BPT

The BPT emission limits for Generator #2 are based on the following:

$PM/PM_{10}/PM_{2.5}$	–	0.12 lb/MMBtu; 06-096 C.M.R. ch. 115, BPT
SO_2	–	Combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO_x	–	4.41 lb/MMBtu 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	–	0.36 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
Visible Emissions	–	06-096 C.M.R., ch. 115, BPT

The BPT emission limits for Generators #1, #2, and #3 are the following:

Unit	Pollutant	lb/MMBtu
Generator #1	PM	0.12
Generator #3	PM	0.12

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	0.72	0.72	0.72	0.01	19.29	5.12	0.54
Generator #2	0.24	0.24	0.24	0.003	9.00	1.94	0.73
Generator #3	0.60	0.60	0.60	0.01	15.90	4.22	0.45

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

2. Best Practical Treatment: Generator #1

   Generator #1 is not subject to either NSPS or NESHAP requirements, as discussed in following sections. Generator #1 is subject to the following BPT requirements:

   a. Generator #1 shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. There is no limit on emergency operation. The emergency generator shall be equipped with a non-resettable hour-meter to record operating time. To demonstrate compliance with the operating hours limit, LAHI shall keep records of the total hours of operation and the hours of emergency operation for each unit.

   b. Generator #1 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 emergency generator is 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]

3. Chapter 169

   Generators #1 and #3 were licensed prior to the effective date of *Stationary Generators*, 06-096 C.M.R. ch. 169 (Chapter 169) and are therefore exempt from this rule pursuant to section 3(B).

   Chapter 169 is applicable to Generator #2. It is an emergency generator powered by an engine with a rated output of less than 1,000 brake horsepower (747 kW). Chapter 169 identifies emission standards for generator engines subject to this chapter and stack height requirements for certain generator engines subject to this chapter.

   a. Chapter 169 Emission Standards Requirements

      For Generator #2, LAHI shall comply with the emission standards for emergency generators by complying with the applicable standards contained in 40 C.F.R. Part 60, Subpart IIII. [06-096 C.M.R. ch. 169, § 4(B)(1)]

   b. Chapter 169 Stack Height Requirements

      Chapter 169 identifies stack height requirements for any stack used to exhaust a generator engine or combination of generator engines with a combined rated output equal to or greater than 1,000 brake horsepower (747 kW). Individual generator

engines with a maximum power capacity of less than 300 kW are not included in the assessment of the combined generator power capacity exhausted through a common stack. Generator #2 is rated at 200 kW and exhausts through its own stack; therefore, there are no stack height requirements in this chapter applicable to Generator #2. [06-096 C.M.R. ch. 169, § 6]

4. New Source Performance Standards (NSPS)

Generator #1
Due to the date of manufacture of Generator #1, 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.

Generators #2 and #3
Generators #2 and #3 are subject to 40 C.F.R. Part 60, Subpart IIII, because the engines were ordered after July 11, 2005, and manufactured after April 1, 2006.
[40 C.F.R. § 60.4200]

A summary of the currently applicable federal 40 C.F.R. Part 60, Subpart 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;

- 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 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. LAHI may only change those emission-related settings that are permitted by the manufacturer.
[40 C.F.R. § 60.4211(a)]

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

(5) Annual Time Limit for Maintenance and Testing
As an emergency engine, Generator #2 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
LAHI 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 Generator #2 operated for emergency purposes, the number of hours Generator #2 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

Generator #1
Generator #1 is not subject to 40 C.F.R. Part 63, Subpart ZZZZ. The unit is considered an existing, emergency stationary reciprocating internal combustion engine at an area HAP source. However, Generator #1 is considered exempt from the requirements of 40 C.F.R. Part 63, Subpart ZZZZ since it is categorized as a residential, commercial, or institutional emergency engine and it does not operate or is not contractually obligated to be available in a demand response program, during a period of deviation from standard voltage or frequency, or for supplying power during a non-emergency

situation as part of a financial arrangement with another entity as specified in 40 C.F.R. § 63.6640(f)(4)(ii).

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

Generators #2 and #3

By meeting the requirements of 40 C.F.R. Part 60, Subpart IIII, Generators #2 and #3 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)]

E. Emergency Generator #4

LAHI operates Generator #4 as an emergency generator. The emergency generator is a generator set consisting of an engine and an electrical generator. Generator #4 has an engine rated at 1.4 MMBtu/hr, which fires propane. Generator #4 was manufactured and installed in 2014**.**

1. BPT Findings

The BPT emission limits for Generator #4 are based on the following:

$PM/PM_{10}/PM_{2.5}$	–	0.05 lb/MMBtu, 06-096 C.M.R. ch. 115, BPT
SO_2	–	5.88×10^{-4} lb/MMBtu per AP-42 Table 3.2-2 dated 7/00
NO_x	–	0.847 lb/MMBtu from AP-42 Table 3.2-2 dated 7/00
CO	–	0.557 lb/MMBtu from AP-42 Table 3.2-2 dated 7/00
VOC	–	0.118 lb/MMBtu from AP-42 Table 3.2-2 dated 7/00
Visible Emissions	–	06-096 C.M.R. ch. 115, BPT

The BPT emission limits for Generator #4 are the following:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #4	0.07	0.07	0.07	0.001	1.14	0.75	0.16

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

2. Chapter 169

Generator #4 was licensed prior to the effective date of *Stationary Generators*, 06-096 C.M.R. ch. 169 and is therefore exempt from this rule pursuant to section 3(B).

3. New Source Performance Standards

Standards of Performance for Spark Ignition Internal Combustion Engines, 40 C.F.R. Part 60, Subpart JJJJ is applicable to Generator #4 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 Generator #4 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 generator 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 Requirement
A non-resettable hour meter shall be installed and operated on the engine. [40 C.F.R. § 60.4237(b)]

(3) Operation and Maintenance Requirement
The engine shall be operated and maintained according to the manufacturer's written instructions or procedures developed by LAHI that are approved by the

engine manufacturer. LAHI may only change those settings that are permitted by the manufacturer. [40 C.F.R. § 60.4243]

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

(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
LAHI 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)]

F. Incinerator #3

LAHI operates Incinerator #3 to dispose of poultry remains resulting from the processes conducted at this facility. BPT for the Class IV-A veterinary incinerator includes the following:

1. Operating temperature in the secondary chamber or refractory lined stack shall be maintained at or above 1,600 ^{o}F with a stack gas retention time of at least 1.0 second at or above 1,600 ^{o}F.

2. To ensure an efficient burn, to prevent odors, and to minimize visible emissions, the secondary chamber shall be preheated, as specified by the manufacturer, until the pyrometer temperature measures a minimum of 1,600 ^{o}F prior to commencing the burn cycle.

3. Once the burn cycle has commenced by introduction of primary chamber combustion, the incinerator shall be operated in an efficient manner and as specified by the manufacturer for the period of time between preheat and reaching the set operational temperature to be a minimum of 1,600 ^{o}F in the secondary chamber.

4. The temperature in the secondary chamber or refractory lined stack shall be maintained at or above 1,600 ºF for the duration of the burn cycle.

5. A pyrometer and ¼-inch test port shall be installed and maintained at the location of the incinerator or refractory lined stack, which provides sufficient volume to insure a flue gas retention time of not less than 1.0 second at the minimum of 1,600 ºF.

6. LAHI shall maintain a log detailing and quantifying the hours of operation on a daily basis for Incinerator #3. The log shall record the weight of each charge to the incinerator, preheat temperature, preheating time, charging time, and afterburner temperature directly after charging and every 60 minutes after startup until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight charged may be logged on the chart. The operation log shall be kept on-site at the incinerator location.

7. LAHI shall maintain a log detailing the maintenance of emission control equipment. Records of the date of each inspection and any corrective action required will be included in the maintenance log. The maintenance log shall be kept on-site at the incinerator location

8. LAHI shall not exceed a particulate emission rate of 0.20 gr/dscf corrected to 12% CO_2 from the auxiliary fuel fired in Incinerator #3. [06-096 C.M.R. 104 § 2(B)]

9. Emissions information is based on the particulate matter emission limit above, the burning of propane fuel as an auxiliary fuel, and the use of AP-42 factors: Tables 2.3-1 and 2.3-2 for biomedical waste incineration (dated 7/93) and Tables 1.5-1 for the combustion of propane (dated 7/08):

   BPT combustion factors and emission limits for Incinerator #3 are the following:

Pollutant	Fuel Combustion Factor (lb/1,000 gal)	Waste Combustion Factor (lb/ton)	Total Emission Limit (lb/hr)
PM	0.2	4.67	0.11
PM_{10}	0.2	4.67	0.11
$PM_{2.5}$	0.2	4.67	0.11
SO_2	0.02	2.17	0.05
NO_x	13	3.56	0.30
CO	7.5	2.95	0.19
VOC	1.0	0.299	0.03

10. Visible emissions from Incinerator #3 shall not exceed 10% opacity on a six-minute block average basis.

11. The ash shall be disposed of in accordance with the requirements of the Department's Bureau of Remediation and Waste Management.

12. The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License.

G. Disinfectant

LAHI uses 70% isopropyl alcohol as a surface cleaner and disinfectant for laboratory activities conducted at the facility. LAHI is licensed to use a maximum of 1,100 gallons of 70% isopropyl alcohol per year at their facility. Based on the density of 70% isopropyl alcohol of 7.31 lb/gal, the total mass is 8,041 lb/yr of 70% isopropyl alcohol. Total isopropyl alcohol usage is determined by multiplying the total at 70% concentration by 0.7 to remove the water fraction. Thus, the total maximum VOC (isopropyl alcohol) emissions from the use of this disinfectant is 5,628.7 lb or 2.81 tons per year. LAHI shall maintain monthly purchase or use records for isopropyl alcohol.

Although isopropyl alcohol is a VOC, this use is exempt from requirements of *Industrial Cleaning Solvents*, 06-096 C.M.R. ch. 166, because it is used in laboratory testing and pharmaceutical manufacturing. [06-096 C.M.R. ch. 166 §§ 3(E) and (H)]

The Department finds that BPT for VOC emissions from the use, handling, storage, and disposal of isopropyl alcohol are the following work practices:

1. Cover open containers of industrial cleaning solvents and used applicators;

2. Minimize air circulation around cleaning operations to the greatest extent practicable and in consideration of best practices for maintaining safe work environments;

3. Properly dispose of used solvents and shop towels; and

4. Maintain cleaning equipment to prevent and repair solvent leaks.

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

H. Annual Emissions

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

- Operating Boilers #1 and #2 and BLDG X-AHU1 for 8,760 hr/yr;
- Operating Generators #1, #2, #3, and #4 for 100 hrs/yr each;
- Operating Incinerator #3 for 8,760 hr/yr; and
- Using 1,100 gallons of 70% isopropyl alcohol per year at the facility.

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

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

	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO	VOC
Boilers #1 and #2 *Propane*	1.1	1.1	1.1	--	3.1	1.8	0.2
BLDG X-AHU1 *Propane*	0.2	0.2	0.2	--	0.6	0.4	--
Generators #1, #2, and #3 *Distillate fuel*	--	--	--	--	2.3	0.6	--
Generator #4 *Propane*	--	--	--	--	0.1	--	--
Incinerator #3 *Propane*	0.5	0.5	0.5	0.2	1.3	0.8	0.1
Disinfectant	--	--	--	--	--	--	2.8
Total TPY	**1.8**	**1.8**	**1.8**	**0.2**	**7.4**	**3.6**	**3.1**

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_{10}	25
$PM_{2.5}$	15
SO_2	50
NO_x	50
CO	250

The total licensed annual emissions for the facility are below the emission levels contained in the table above and there are no extenuating circumstances; therefore, an ambient air quality impact analysis is not required as part of this license.

This determination is based on information provided by the applicant regarding 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 LAHI to submit additional information and may require an ambient air quality impact analysis at that time.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards, and
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-859-71-K-R 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.

(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 the written test report by the Department, or another alternative timeframe approved by the Department, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 C.F.R. Part 60 or other method approved or required by the Department; and

B. The days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and

C. The licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

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

(13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or license requirement. [06-096 C.M.R. ch. 115]

(14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 C.M.R. ch. 115]

(15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 C.M.R. ch. 115]

(16) The licensee shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S. § 605). [06-096 C.M.R. ch. 115]

SPECIFIC CONDITIONS

(17) **Boilers #1 and #2**

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

Emission Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	0.13	0.13	0.13	--	0.36	0.20	0.03
Boiler #2	0.13	0.13	0.13	--	0.36	0.20	0.03

B. Visible emissions from Boilers #1 and #2 shall each not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 3(A)(3)]

(18) **BLDG X-AHU1**

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

Emission Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
BLDG X-AHU1	0.05	0.05	0.05	--	0.14	0.08	0.01

B. Visible emissions from BLDG X-AHU1 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 3(A)(3)]

(19) **Emergency Generators #1, #2, and #3**

A. The Emergency Generators 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, BPT]

B. The fuel sulfur content for Generators #1, #2, and #3 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]

C. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Generator #1	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)
Generator #3	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)

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

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	0.72	0.72	0.72	0.01	19.29	5.12	0.54
Generator #2	0.24	0.24	0.24	0.003	9.00	1.94	0.73
Generator #3	0.60	0.60	0.60	0.01	15.90	4.22	0.45

E. Visible Emissions

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

F. Generator #1 shall be operated under the following parameters:

1. LAHI shall keep records that include maintenance conducted on Generator #1 and the hours of operation of the engines 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.

2. Generator #1 is an emergency generator and 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 emergency generator is 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]

G. Generators #2 and #3 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, BPT]

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). 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-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, BPT]

b. LAHI 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. [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. LAHI may only change those emission-related settings that are permitted by the manufacturer. [40 C.F.R. § 60.4211(a)]

LAHI shall have available for review by the Department a copy of the manufacturer's written instructions or procedures developed by LAHI that are approved by the engine manufacturer for engine operation and maintenance. [06-096 C.M.R. ch. 115, BPT]

(20) **Emergency Generator #4**

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

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #4	0.07	0.07	0.07	0.001	1.14	0.75	0.16

B. Visible Emissions

Visible emissions from Generator #4 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

C. Generator #4 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, BPT]

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

   LAHI shall have available for review by the Department a copy of the manufacturer's written instructions or procedures developed by LAHI that are approved by the engine manufacturer for engine operation and maintenance. [06-096 C.M.R. ch. 115, BPT]

(21) **Incinerator #3**

A. The incinerator shall be used for the disposal of type 4 (veterinary) waste and shall not be used for the disposal of plastics, cytotoxic (antineoplastic) drugs, or any radioactive wastes and shall not be used to dispose of any medical waste classified as type 7 waste, as defined in 06-096 C.M.R. ch. 100. However, the incidental use of plastics or other materials used in wrapping animal carcasses for handling and storage purposes is allowed. [06-096 C.M.R. ch. 115, BPT]

B. The incinerator shall not exceed the maximum design charging rate of 1,200 lbs. Auxiliary fuel input to the primary and secondary chamber shall be LPG/propane. [06-096 C.M.R. ch. 115, BPT]

C. LAHI shall maintain a log detailing and quantifying the hours of operation on a daily basis for Incinerator #3. The log shall record the weight of each charge to the incinerator, preheat temperature, preheating time, charging time, afterburner temperature directly after charging and every 60 minutes after startup until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight charged may be logged on the chart. The operation log shall be kept on-site at the incinerator location. [06-096 C.M.R. ch. 115, BPT]

D. LAHI shall maintain a log detailing the maintenance of emission control equipment. Records of the date of each inspection and any corrective action required will be included in the maintenance log. The maintenance log shall be kept on-site at the incinerator location. [06-096 C.M.R. ch. 115, BPT]

E. The secondary chamber shall be preheated as specified by the manufacturer to a minimum of 1,600 ^{0}F prior to combusting any waste and shall be maintained at a minimum of 1,600 ^{0}F during the duration of the burn. [06-096 C.M.R. ch. 115, BPT]

F. Once the burn cycle has commenced by introduction of primary chamber combustion, the incinerator shall be operated in an efficient manner and as specified by the manufacturer for the period of time between preheat and reaching the set operational temperature to be a minimum of 1,600 ^{0}F in the secondary chamber. [06-096 C.M.R. ch. 115, BPT]

G. A pyrometer and ¼-inch test port shall be operated and maintained at that location of the incinerator or refractory lined stack which provides sufficient volume to insure a flue gas retention time of not less than 1.0 second at the minimum temperature of 1,600 ^{0}F. [06-096 C.M.R. ch. 115, BPT]

H. LAHI shall not exceed a particulate matter emission limit of 0.2 gr/dscf corrected to 12% CO_2 from the auxiliary fuel. Therefore, based on the maximum design combustion rate and continuous operation of the Class IV-A incinerator, emissions shall be limited to the following [06-096 C.M.R. ch. 115, BPT]:

Pollutant	gr/dscf	lb/hr
PM	0.2	0.11
PM_{10}	0.2	0.11
$PM_{2.5}$	0.2	0.11
SO_2	n/a	0.05
NO_x	n/a	0.30
CO	n/a	0.19
VOC	n/a	0.03

I. Visible emissions from the incinerator shall not exceed an opacity limit of 10% on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

J. The ash shall be disposed of in accordance with the requirements of the Department's Bureau of Remediation and Waste Management. [06-096 C.M.R. ch. 115, BPT]

K. The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications, and shall be familiar with the terms of this Air Emission License as it pertains to the operation of the incinerator. [06-096 C.M.R. ch. 115, BPT]

L. Although not required at this time, the installation and operation of continuous chart recording devices may become necessary to document compliance with the temperature requirements of this license. Should the Bureau of Air Quality determine that continuous recording devices are necessary, the licensee shall, within 120 days, demonstrate that continuous recorders have been installed and are operational. [06-096 C.M.R. ch. 115, BPT]

(22) **Disinfectant**

LAHI is licensed to use a maximum 1,100 gallons of 70% isopropyl alcohol per year at their facility. LAHI shall maintain monthly purchase or use records for isopropyl alcohol.

To limit VOC emissions from the use, handling, storage, and disposal of isopropyl alcohol, LAHI shall use the following work practices:

A. Cover open containers of industrial cleaning solvents and used applicators;

B. Minimize air circulation around cleaning operations to the greatest extent practicable and in consideration of best practices for maintaining safe work environments;

C. Properly dispose of used solvents and shop towels; and

D. Maintain cleaning equipment to prevent and repair solvent leaks.

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

(23) 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, LAHI may be required to submit additional information. Upon written request from the Department, LAHI shall provide information necessary to demonstrate AAQS will not be exceeded, potentially including submission of an ambient air quality impact analysis or an application to amend this air emission license to resolve any deficiencies and ensure compliance with AAQS. Submission of this information is due within 60 days of the Department's written request unless otherwise stated in the Department's letter. [06-096 C.M.R. ch. 115, § 2(O)]

DONE AND DATED IN AUGUSTA, MAINE THIS 26th DAY OF JULY, 2023.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____ for
MELANIE LOYZIM, COMMISSIONER

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

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

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: December 1, 2022
Date of application acceptance: December 5, 2022

Date filed with the Board of Environmental Protection:

This Order prepared by Kendra Nash, Bureau of Air Quality.

FILED

JUL 26, 2023

State of Maine
Board of Environmental Protection