



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

Laurel Hill Cemetery Association
York County
Saco, Maine
A-491-71-J-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

Laurel Hill Cemetery Association (Laurel Hill) was issued Air Emission License A-491-71-H-R on July 7, 2023, for the operation of a Class IV-A crematory. The license was subsequently amended on November 10, 2025 (A-491-71-I-A) to add Crematory Incinerator #3.

The equipment addressed in this license amendment is located at 293 Beach Street, Saco, Maine.

Laurel Hill has requested an amendment to remove Crematory Incinerators #1 and #2 and to add Crematory Incinerator #4. As part of this amendment, the Department is also correcting annual emission calculations in the annual emissions table.

B. Emission Equipment

Both Jarvis units (Crematory Incinerators #1 and #2) have been removed and will not be discussed further in this license.

Laurel Hill plans to add a crematory incinerator, Crematory Incinerator #4, which is an identical unit to Crematory Incinerator #3, Model Power-Pak I (IE43-PPI) with the following specifications:

Class Incinerator	IV-A
No. of Chambers	2
Type of Waste	Type 4
Max. Design Combustion Rate (lb/hr)	150
Auxiliary Fuel Input:	Propane
Primary Chamber (MMBtu/hr)	1.0
Secondary Chamber (MMBtu/hr)	1.2
Emission Control	Afterburner

The cremator combustion gases vent to a 16.5 foot Above Ground Level (AGL) stack.

C. 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 Emissions” 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 Emissions Levels
PM	4.0	4.0	-	100
PM ₁₀	4.0	4.0	-	100
PM _{2.5}	4.0	4.0	-	100
SO ₂	2.0	1.4	-0.6	100
NO _x	7.1	5.0	-2.1	100
CO	5.0	3.6	-1.4	100
VOC	0.6	0.4	-0.2	50*

* Laurel Hill is located in an area of the state included in the Ozone Transport Region. Therefore, the significant emissions level for VOC is 50 tpy.

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

D. Facility Classification

The facility is licensed as follows:

- As a natural minor source of criteria pollutants, 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. Crematory Incinerator #4

Laurel Hill is adding a crematory incinerator, Crematory Incinerator #4. The new incinerator is a Matthews Environmental Solutions IE43-PPI. The primary chamber has a maximum design heat input capacity of 1.0 MMBtu/hr, and the secondary chamber has a maximum design heat input capacity of 1.2 MMBtu/hr. The design combustion rate is 150 lb/hr and it will exhaust through its own stack, Stack #2.

BACT for Crematory Incinerator #4 is the following:

1. Emission Limits

Emissions information is based on a licensed allowed particulate matter emission limit of 0.10 gr/dscf, corrected to 12% CO₂, the burning of propane as an auxiliary fuel, and the use of the following factors:

The BACT emissions from the **propane** burner portion of the total exhaust were based on the following:

- PM/PM₁₀/PM_{2.5} – 0.05 lb/MMBtu, 06-096 C.M.R. ch. 115, BACT
- SO₂ – 0.054 lb/1,000 gallons, AP-42 Table 1.5-1 dated 5/25
- NO_x – 13.0 lb/1,000 gallons, AP-42 Table 1.5-1 dated 5/25
- CO – 7.5 lb/1,000 gallons, AP-42 Table 1.5-1 dated 5/25
- VOC – 1.0 lb/1,000 gallons, AP-42 Table 1.5-1 dated 5/25

The BACT emissions from the **biomedical** portion of the total exhaust were based on the following:

- PM/PM₁₀/PM_{2.5} – 4.67 lb/ton, AP-42 Table 2.3-2 dated 7/93
- SO₂ – 2.17 lb/ton, AP-42 Table 2.3-2 dated 7/93
- NO_x – 3.56 lb/ton, AP-42 Table 2.3-2 dated 7/93
- CO – 2.95 lb/ton, AP-42 Table 2.3-2 dated 7/93
- VOC – 0.299 lb/ton, AP-42 Table 2.3-2 dated 7/93

The pound per hour BACT emissions for Crematory Incinerator #4 are as follows:

	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)
Fuel Combustion	0.11	0.11	0.11	-	0.31	0.18	0.02
Biomedical Portion	0.35	0.35	0.35	0.16	0.27	0.22	0.02
Total Emission Limit	0.46	0.46	0.46	0.16	0.58	0.40	0.04

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

2. Operating Parameters

- a. Operating temperature in the secondary chamber shall be maintained at or above 1,600 °F for the duration of the burn cycle, with a stack gas retention time of at least 1.0 second at or above 1,600 °F.
- b. To ensure an efficient burn, and to prevent odors and visible emissions, the secondary chamber shall be preheated, as specified by the manufacturer, until the pyrometer temperature measures at least 1,600 °F.
- c. No remains shall be introduced into the primary chamber until the temperature in the secondary chamber has reached 1,600 °F.
- d. Once the burn cycle has commenced by introduction of primary chamber combustion, the cremator 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 °F in the secondary chamber.

- e. A pyrometer and ¼-inch test port shall be installed and maintained at that location of the cremator or refractory lined stack which provides sufficient volume to insure a flue gas retention time of not less than 1.0 second at a minimum of 1,600 °F.
- f. A log shall be maintained recording the weight of the remains, preheat time, charging time and the temperature of the secondary chamber every 60 minutes after start-up until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight charged shall be logged on the chart.
- g. The cremator operator(s) shall receive adequate training to operate the cremator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License.

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 operating each of the incinerators for 8,760 hours per calendar year.

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	PM₁₀	PM_{2.5}	SO₂	NO_x	CO	VOC
Crematory Incinerator #3	2.0	2.0	2.0	0.7	2.5	1.8	0.2
Crematory Incinerator #4	2.0	2.0	2.0	0.7	2.5	1.8	0.2
Total TPY	4.0	4.0	4.0	1.4	5.0	3.6	0.4

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 amendment.

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

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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-491-71-J-A subject to the conditions found in Air Emission License A-491-71-H-R and in amendment A-491-71-I-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.

The following shall replace Condition (17)(C) of Air Emission License A-491-71-H-R:

(17) Crematory Incinerators

- C. Each crematory incinerator shall not exceed a particulate matter emission limit of 0.10 gr/dscf, corrected to 12% CO₂. Emissions from the crematory incinerators shall not exceed the following:

Cremator Emission Limits, lb/hr

	Crematory Incinerator #3	Crematory Incinerator #4
PM	0.46	0.46
PM₁₀	0.46	0.46
PM_{2.5}	0.46	0.46
SO₂	0.16	0.16
NOx	0.58	0.58
CO	0.40	0.40
VOC	0.04	0.04

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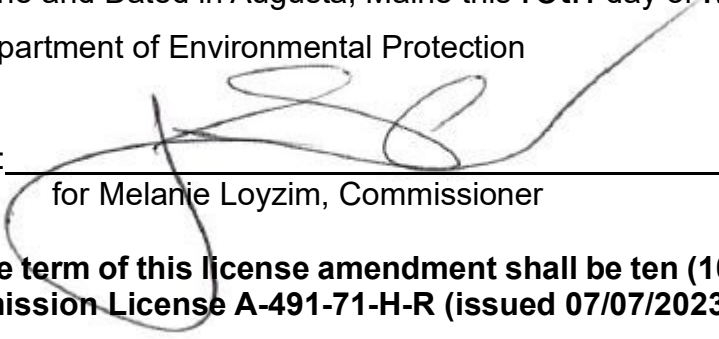
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Compliance shall be demonstrated through stack testing by request of the Department, in accordance with the appropriate method found in 40 C.F.R. Part 60, Appendix A. [06-096 C.M.R. ch. 115, BPT/BACT]

Done and Dated in Augusta, Maine this **15th** day of **MAY, 2026**.

Department of Environmental Protection

BY: 

for Melanie Loyzim, Commissioner

The term of this license amendment shall be ten (10) years from the issuance of Air Emission License A-491-71-H-R (issued 07/07/2023).

[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: April 22, 2026

Date of application acceptance: April 24, 2026

This Order prepared by Zac Hicks, Bureau of Air Quality.