



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

DEPARTMENT ORDER

New England Waste Services of ME, Inc.  
d/b/a Pine Tree Landfill  
Penobscot County  
Hampden, Maine  
A-850-71-F-M

Departmental  
Findings of Fact and Order  
Air Emission License  
Amendment #1

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

New England Waste Services of ME, Inc. d/b/a Pine Tree Landfill (PTL) was issued Air Emission License A-850-71-E-R/A on January 29, 2021, for the operation of emission sources associated with their closed municipal solid waste landfill.

The equipment addressed in this license is located at 358 Emerson Mill Road in Hampden, Maine.

PTL has requested a minor revision to their license in order to install a new flare (Flare #4) that will replace Flare #3.

B. Emission Equipment

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

**Flares**

<b>Equipment</b>	<b>Maximum Heat Input Capacity (MMBtu/hr)</b>	<b>Maximum Flow Rate (scfm)</b>
<i>Flare #3*</i>	90.0	3,000
Flare #4	27.1	745

\* Flare #3 is being removed as part of this licensing action.

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.

This amendment will not increase licensed emissions of any pollutant. Pursuant to § 2(R) of *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (C.M.R.) ch. 115, replacement of an existing air pollution control system may be considered a minor revision provided the new equipment achieves BPT. As discussed below, the new flare will achieve BPT. Therefore, this application has been processed as a minor revision in accordance with 06-096 C.M.R. ch. 115.

D. Facility Classification

With the limits on annual criteria pollutant and HAP emissions contained in the Order section of this license, the facility is licensed as follows:

- As a synthetic minor source of air emissions for criteria pollutants, because PTL is subject to license restrictions that keep facility emissions below major source thresholds for SO<sub>2</sub> and VOC; and
- As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for HAP.

As described in Air Emission License A-850-71-E-R/A (issued 1/29/2021), the emission limits for hazardous air pollutants are intended to demonstrate that the facility is an area source of HAP. With this license the annual emission limits for HAP are being lowered to 7.9 tpy for any single HAP and 19.9 tpy for all HAP combined to demonstrate that this facility is no longer classified as an 80% Synthetic Minor for the purpose of determining the minimum required compliance inspection frequency in accordance with Maine's Compliance Monitoring Strategy.

## 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. Flare #4

PTL has proposed the installation of a new flare (Flare #4) to replace the existing Flare #3. Following the landfill's closure in 2009, landfill gas (LFG) generation and methane content of the LFG has steadily declined. The declining quantities of LFG being generated and its methane content are approaching the lower designed operating range for Flare #3. Flare #4 will be more appropriately sized for the LFG currently being produced by the landfill.

Flare #4 has a maximum design heat input of 27.1 MMBtu/hr and can flare up to approximately 745 standard cubic feet per minute (scfm) of LFG with a methane content of up to 60%.

The BACT emission limits for Flare #4 were based on the following:

PM/PM<sub>10</sub> – 17 lb/MMscf of methane based on AP-42 Table 2.4-5 dated 5/25  
NO<sub>x</sub> – 38 lb/MMscf of methane based on AP-42 Table 2.4-5 dated 5/25  
CO – 0.31 lb/MMBtu based on manufacturer specifications  
VOC – based on 98% control efficiency  
Visible Emissions – 06-096 C.M.R. ch. 115, BPT

The BACT emission limits for Flare #4 are the following:

Unit	Pollutant	lb/MMBtu
Flare #4	PM	0.017

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	PM <sub>2.5</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Flare #4	0.46	0.46	0.46	1.02	8.40	3.43

Emissions of SO<sub>2</sub> are caused by combustion of total reduced sulfur (TRS) compounds in the landfill gas and are independent of the flare's operation. BPT for emissions of SO<sub>2</sub> from the landfill were addressed in Air Emission License A-850-71-E-R/A (issued 1/29/2021), which established a facility-wide SO<sub>2</sub> emission limit of 28.0 ton per year (tpy). Compliance is demonstrated by regular testing of the landfill gas pursuant to PTL's current air emission license.

PTL shall continuously utilize Flare #4 to control emissions from the LFG collection system except for periods of scheduled or unscheduled maintenance and repair and equipment malfunction. Periods of flare downtime due to maintenance, repair, and

equipment malfunction shall not exceed 438 hours per year on a 12-month rolling total basis.

Visible emissions from Flare #4 shall not exceed 20% opacity on a six-minute block average basis.

**C. Flare #3 Downtime**

PTL's current air emission license limits periods of downtime for Flare #3 to 438 hours per year on a 12-month rolling total basis.

Due to the time needed to acquire all necessary permits, including Solid Waste licensing of the modified collection and control system, PTL anticipates installing Flare #4 in June 2026. In the interim, PTL expects there may be increased periods of downtime for Flare #3. When operating at the lower end of its operating range, Flare #3 is more likely to experience difficulty keeping the flare lit during periods of high winds. PTL has requested a temporary increase in the limit on flare downtime until Flare #4 is brought online.

December 2024 had the highest amount of flare downtime for that calendar year. PTL experienced 77 hours of downtime in that month. PTL has proposed a temporary increase in the downtime limit for Flare #3 to 972 hours per year on a 12-month rolling total basis. This proposed limit assumes 77 hours of downtime per month plus two days of downtime needed when Flare #3 is taken out of service and replaced with Flare #4.

The Department finds the proposed limit to be reasonable and is BPT for emissions from the landfill based on the current low flowrate of the LFG and the limited nature of the activity.

**D. Emission Statements**

PTL is subject to emissions inventory requirements contained in *Emission Statements*, 06-096 C.M.R. ch. 137. PTL shall maintain the following records in order to comply with this rule:

1. Hours Flares #3 and #4 are operating or active on a monthly and calendar year basis;
2. Hours of downtime of Flares #3 and #4;
3. LFG flow (scf) to Flares #3 and #4 on a monthly and calendar year basis;
4. Site-specific sampling data on the NMOC concentration of the LFG; and
5. TRS concentration of the LFG measured on a quarterly basis.

Every third year, or as requested by the Department, PTL shall report to the Department emissions of hazardous air pollutants as required pursuant to 06-096 C.M.R. ch. 137, § (3)(C). The next report is due no later than May 15, 2027, for emissions occurring in calendar year 2026. The Department will use these reports to calculate and invoice for the

applicable annual air quality surcharge for the subsequent three billing periods. PTL shall pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3). [38 M.R.S. § 353-A(1-A)]

E. 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.

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

	PM	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
<b>Facility-Wide Total</b>	<b>2.9</b>	<b>2.9</b>	<b>28.0</b>	<b>11.7</b>	<b>63.5</b>	<b>40.4</b>

<b>Pollutant</b>	<b>Tons/year</b>
Single HAP	7.9
Total HAP	19.9

**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-850-71-F-M subject to the conditions found in Air Emission License A-850-71-E-R/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 Condition (17)(B) of Air Emission License A-850-71-E-R/A upon startup of Flare #4:

### (17) Solid Waste Landfill

- B. PTL shall operate and maintain a landfill gas collection and control system, including Flare #4. [06-096 C.M.R. ch. 115, BPT]

The following shall replace Condition (18)(A) of Air Emission License A-850-71-E-R/A:

### (18) Facility-Wide Emission Limits

- A. PTL shall not exceed the following emission limits on a 12-month rolling total basis: [06-096 C.M.R. ch. 115, BACT]

Pollutant	(ton/year)
PM	2.9
PM <sub>10</sub>	2.9
PM <sub>2.5</sub>	2.9
SO <sub>2</sub>	28.0
NO <sub>x</sub>	11.7
CO	63.5
VOC	40.4
Single HAP	7.9
Total HAP	19.9

The following shall replace Conditions (18)(F) and (G) of Air Emission License A-850-71-E-R/A:

### (18) Facility-Wide Emission Limits

- F. To demonstrate compliance with the PM, PM<sub>10</sub>, NO<sub>x</sub>, and CO annual limits, PTL shall calculate annual emissions based on the amount of LFG sent to the flare and the following emission factors derived from the licensed emission limits established for Flares #3 and #4. [06-096 C.M.R. ch. 115, BACT]

	PM (lb/MMBtu)	PM <sub>10</sub> (lb/MMBtu)	PM <sub>2.5</sub> (lb/MMBtu)	NO <sub>x</sub> (lb/MMBtu)	CO (lb/MMBtu)
Flare #3	0.017	0.017	0.017	0.040	0.370
Flare #4	0.017	0.017	0.017	0.038	0.310

- G. To demonstrate compliance with the VOC annual limit, PTL shall calculate annual emissions based on a combination of VOC emissions from Flares #3 and #4 and fugitive emissions of VOC. VOC emissions from Flares #3 and #4 shall be calculated based on the amount of LFG sent to the flare and site-specific concentration data based on sampling previously performed. Fugitive VOC emissions from the landfill shall be calculated in accordance with EPA's Compilation of Emission Factors (AP-42), Section 2.4, *Municipal Solid Waste Landfills*. [06-096 C.M.R. ch. 115, BACT]

**The following shall replace Condition (19)(A) of Air Emission License A-850-71-E-R/A:**

**(19) Flare #3**

- A. PTL shall continuously utilize Flare #3 to control emissions for the LFG collection system except for periods of scheduled or unscheduled maintenance and repair and equipment malfunction. Periods of flare downtime due to maintenance, repair, and equipment malfunction shall not exceed 972 hours per year on a 12-month rolling total basis. [06-096 C.M.R. ch. 115, BPT]

**Upon startup of Flare #4, Condition (19) of Air Emission License A-850-71-E-R/A as amended above shall be replaced with the following:**

**(19) Flare #4**

- A. PTL shall continuously utilize Flare #4 to control emissions for the LFG collection system except for periods of scheduled or unscheduled maintenance and repair and equipment malfunction. Periods of flare downtime due to maintenance, repair, and equipment malfunction shall not exceed 438 hours per year on a 12-month rolling total basis. [06-096 C.M.R. ch. 115, BACT]
- B. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Flare #4	PM	0.017	06-096 C.M.R. ch. 115, BACT

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

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	PM <sub>2.5</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Flare #4	0.46	0.46	0.46	1.02	8.40	3.43

- D. Visible emissions from Flare #4 shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

- E. PTL shall record data and maintain records for the following periodic monitoring values for Flare #4.
1. Periods of downtime on a monthly, calendar year, and 12-month rolling total basis (date and length of time); [06-096 C.M.R. chs. 115 and 137]
  2. Reason for all flare downtime; [06-096 C.M.R. ch. 115, BACT]
  3. LFG flow to Flare #4 (scf) on a monthly, calendar year, and 12-month rolling total basis; [06-096 C.M.R. chs. 115 and 137]
  4. TRS concentration of the LFG measured on a quarterly basis.  
[06-096 C.M.R. ch. 115, BACT]

**The following shall replace Condition (20) of Air Emission License A-850-71-E-R/A:**

**(20) Annual Emission Statements**

- A. In accordance with *Emission Statements*, 06-096 C.M.R. ch. 137, PTL shall annually report to the Department, in a format prescribed by the Department, the information necessary to accurately update the State's emission inventory. The emission statement shall be submitted as specified by the date in 06-096 C.M.R. ch. 137.
- B. PTL shall keep the following records in order to comply with 06-096 C.M.R. ch. 137:
1. Hours Flares #3 and #4 are operating or active on a monthly and calendar year basis;
  2. Hours of downtime of Flares #3 and #4;
  3. LFG flow (scf) to Flares #3 and #4 on a monthly and calendar year basis;
  4. Site-specific sampling data on the NMOC concentration of the LFG; and
  5. TRS concentration of the LFG measured on a quarterly basis.  
[06-096 C.M.R. ch. 137]
- C. Every third year, or as requested by the Department, PTL shall report to the Department emissions of hazardous air pollutants as required pursuant to 06-096 C.M.R. ch. 137, § (3)(C). The next report is due no later than May 15, 2027, for emissions occurring in calendar year 2026. PTL shall pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3).  
[38 M.R.S. § 353-A(1-A)]



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**The following are new conditions:**

- (21) PTL is licensed to install and operate Flare #4. Flare #3 shall cease operation and be permanently disabled or removed from the site within 30 days of completion of Flare #4 commissioning. PTL shall notify the Department in writing of the date of completion of Flare #4 commissioning and the date of shutdown of Flare #3. [06-096 C.M.R. ch. 115, BACT]
- (22) If the Department determines that any parameter value pertaining to construction and operation of the 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, PTL may be required to submit additional information. Upon written request from the Department, PTL 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 30<sup>th</sup> DAY OF JULY, 2025.

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-850-71-E-R/A (issued 1/29/2021).**

[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: 6/24/2025  
Date of application acceptance: 6/27/2025

This Order prepared by Lynn Muzzey, Bureau of Air Quality.