

**New England Waste Services of ME, Inc.
dba Pine Tree Landfill
Penobscot County
Hampden, Maine
A-850-70-A-I**

**Departmental
Findings of Fact and Order
Part 70 Air Emission License**

After review of the Initial Part 70 License application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A, Section 344 and Section 590, the Department finds the following facts:

I. Registration

A. Introduction

FACILITY	New England Waste Services of ME, Inc. dba Pine Tree Landfill (PTL)
LICENSE NUMBER	A-850-70-A-I
LICENSE TYPE	Initial Part 70 License
NAICS CODES	562212
NATURE OF BUSINESS	Solid Waste Landfill
FACILITY LOCATION	Hampden, Maine
DATE OF LICENSE ISSUANCE	June 9, 2003
LICENSE EXPIRATION DATE	June 9, 2008

B. Emission Equipment

The following emission units are addressed by this Part 70 License:

EMISSION UNIT ID	UNIT CAPACITY
Solid Waste Landfill	3,890,000 cubic yards
Flare	13.7 MMBTU/hr
Generation Unit	12.454 MMBtu/hr

PTL has additional insignificant activities which do not need to be listed in the emission equipment table above. The list of insignificant activities can be found in the Part 70 license application and in Appendix B of Chapter 140 of the Department's Regulations.

C. Application Classification

PTL has obtained the required permits and approvals for an expansion that causes the total permitted size of their landfill to exceed 2.5 million cubic meters. Therefore, PTL is required to obtain a Part 70 License per 40 CFR §60.752(b) and section 1(C)(2) of Chapter 140 of the Department's regulations. This license is

considered to be an Initial Part 70 License issued under Chapter 140 of the Department's regulations for a Part 70 source.

II. EMISSION UNIT DESCRIPTION

A. Solid Waste Landfill & Flare

PTL operates and maintains a municipal solid waste landfill that is subject to New Source Performance Standards (NSPS) Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills.

In November 2001, PTL submitted an Initial Design Capacity Report as required by Subpart WWW, specifically 40 CFR §§ 60.752(a) and 60.757(a). At that time, the total permitted design capacity of the landfill was 2.39 million cubic meters which was below the threshold for requiring a Part 70 license (i.e., 2.5 million cubic meters).

In December 2001, PTL received permit approval for an expansion to the landfill. In January 2002, PTL submitted an Amended Design Capacity Report as required by 40 CFR §§ 60.752(a)(1) and 60.757(a)(3). The total permitted design capacity of the landfill was reassessed at this time and calculated to be 3.89 million cubic meters.

Subpart WWW requires that landfills with a design capacity in excess of 2.5 million cubic meters calculate a Nonmethane Organic Compound (NMOC) emission rate. If the annual NMOC emission rate is found to be greater than 50 megagrams per year, the owner of the landfill is required to install a collection and control system that complies with Subpart WWW.

The process of determining the NMOC emission rate is prescribed by Subpart WWW and is a tiered analysis. In Tier 1 of the analysis, PTL calculated NMOC emissions based on a first order decay equation with default parameters and site specific waste values. PTL used a model developed by the EPA entitled "Landfill Gas Emissions Model (LandGEM), Version 2.01". The Tier I analysis indicated that the uncontrolled NMOC emissions from the landfill would exceed 50 megagrams per year. PTL therefore decided to proceed to a Tier 2 analysis.

Using a Tier 2 analysis allows for the collection of site-specific NMOC concentrations to be included in the LandGEM model. PTL conducted Tier 2 sampling in November 2002. Based on the sampling information, the Tier 2 analysis showed an NMOC emission rate of 5.5 megagrams per year prior to control by the flare system. (Note that these emissions are reduced by approximately 98% by the flare). Because both controlled and uncontrolled

emissions rates were below the 50 megagram threshold in Subpart WWW, PTL did not elect to continue to a Tier 3 analysis.

Since PTL's calculated NMOC emissions are less than 50 megagrams per year, this facility is not required to install a collection and control system that complies with Subpart WWW. However, PTL has voluntarily installed a collection and control system that is designed to meet the criteria set forth in Subpart WWW. This system consists of a gas collection system and flare. The flare has a maximum heat value of 13.7 MMBtu/hr and is designed to achieve 98% overall destruction of total hydrocarbons. The flare also uses a small amount of propane as a pilot light.

PTL has submitted information to the Department which demonstrates that the landfill is not a major source of HAPs.

Streamlining

Opacity

PTL accepts streamlining for opacity requirements. Chapter 101 of the Department's regulations and Best Practical Treatment (BPT) requirements are applicable. The Best Practical Treatment (BPT) opacity limits are more stringent. Therefore, only the more stringent BPT opacity limits are included in this license.

Periodic Monitoring

Periodic monitoring shall consist of record keeping which includes records of the design capacity report, the current amount of solid waste in-place, and the year-by-year waste acceptance rate.

Based on best management practices and the type of fuel fired, it is unlikely that the flare will exceed its opacity limit. Therefore, periodic monitoring by the source for opacity in the form of visible emission testing is not required. However, neither the EPA nor the State is precluded from performing its own testing and may take enforcement action for any violations discovered.

B. Generation Unit

PTL proposes to install a 12.454 MMBtu/hr electrical generation unit. The generation unit is a Deutz TBG 620 reciprocating internal combustion engine which fires landfill gas to produce electricity. Guaranteed "not to exceed" emissions data is not available due to the natural variability of the landfill gas. However, maximum NO_x emissions are estimated to be 1.2 g/bhp*hr.

Therefore, Best Available Control Technology (BACT) for the generation unit has been determined to be record keeping which includes records of maintenance performed on the unit as well as hours of run time on a monthly basis.

Streamlining

Opacity

PTL accepts streamlining for opacity requirements. Chapter 101 of the Department's regulations and Best Practical Treatment (BPT) requirements are applicable. The Best Practical Treatment (BPT) opacity limits are more stringent. Therefore, only the more stringent BPT opacity limits are included in this license.

Periodic Monitoring

Periodic monitoring shall consist of record keeping which includes records of maintenance performed on the Co-Generation unit as well as monthly records of operating time.

Based on best management practices and the type of fuel for which the Generation Unit was designed, it is unlikely that it will exceed its emission limits. Therefore, periodic monitoring by the source for pollutant emissions is not required. However, neither the EPA nor the State is precluded from requesting PTL to perform testing and may take enforcement action for any violations discovered.

C. Facility Emissions

Total Allowable Annual Emissions for the Facility
(used to calculate the license fee)

	PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Flare	3.0	3.0	2.2	12.0	10.1	N/A
Generation Unit	2.7	2.7	2.0	21.8	43.5	N/A
Facility Wide Limits	N/A	N/A	N/A	N/A	N/A	49.9
Total TPY	5.7	5.7	4.2	33.8	53.6	49.9

III. AIR QUALITY ANALYSIS

According to Chapter 140 of the Department's regulations, an existing Part 70 source shall be exempt from an impact analysis with respect to a regulated pollutant whose allowable emissions do not exceed the following:

<u>Pollutant</u>	<u>Tons/year</u>
PM	25
PM ₁₀	25
SO ₂	50
NO _x	100
CO	250

Based on facility license allowed emissions, PTL is below the emissions level required for modeling and monitoring.

ORDER

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

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

The Department hereby grants the Part 70 License A-850-70-A-I pursuant to MEDEP Chapter 140 and the preconstruction permitting requirements of MEDEP Chapter 115 and subject to the standard and special conditions below.

Federally enforceable conditions in this Part 70 license must be changed pursuant to the applicable requirements in Chapter 115 for making such changes and pursuant to the applicable requirements in Chapter 140.

For each standard and special condition which is state enforceable only, state-only enforceability is designated with the following statement: **Enforceable by State-only.**

STANDARD STATEMENTS

- (1) 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;
- (2) The Part 70 license does not convey any property rights of any sort, or any exclusive privilege;
- (3) All terms and conditions are enforceable by EPA and citizens under the CAA unless specifically designated as state enforceable.
- (4) 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;
- (5) Notwithstanding any other provision 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 Part 70 license requirement.
- (6) Compliance with the conditions of this Part 70 license shall be deemed compliance with any Applicable requirement as of the date of license issuance and is deemed a permit shield, provided that:
 - (a) Such Applicable and state requirements are included and are specifically identified in the Part 70 license, except where the Part 70 license term or condition is specifically identified as not having a permit shield; or
 - (b) The Department, in acting on the Part 70 license application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the Part 70 license includes the determination or a concise summary, thereof.

Nothing in this section or any Part 70 license shall alter or effect the provisions of Section 303 of the CAA (emergency orders), including the authority of EPA under Section 303; the liability of an owner or operator of a source for any

violation of Applicable requirements prior to or at the time of permit issuance; or the ability of EPA to obtain information from a source pursuant to Section 114 of the CAA.

The following requirements have been specifically identified as not applicable based upon information submitted by the licensee in an application dated December 13, 2002.

	SOURCE	CITATION	DESCRIPTION	BASIS FOR DETERMINATION
A	Flare	Chapter 104	Incinerator Particulate Emission Standard	The Flare is not considered an incinerator.
B	Facility	Chapter 105	General Process Source Particulate Emission Standard	All emission sources of PM at this facility are considered fugitive
C	Facility	Chapter 134	VOC RACT	Licensed VOC emissions less than 40 ton/year.
D	Facility	40 CFR Part 63, Subpart AAAA	EPA's National Emission Standards for Hazardous Air Pollutants: Municipal Waste Landfills	Facility has potential to emit < 10 tpy of HAP, < 25 tpy of all HAPs, < 50 Mg/year of NMOCs and does not include a bioreactor.

- (7) The Part 70 license shall be reopened for cause by the Department or EPA, prior to the expiration of the Part 70 license, if:
- (a) Additional Applicable requirements under the CAA become applicable to a Part 70 major source with a remaining Part 70 license term of 3 or more years. However, no opening is required if the effective date of the requirement is later than the date on which the Part 70 license is due to expire, unless the original Part 70 license or any of its terms and conditions has been extended pursuant to Chapter 140;
 - (b) Additional requirements (including excess emissions requirements) become applicable to a Title IV source under the acid rain program. Upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the Part 70 license;
 - (c) The Department or EPA determines that the Part 70 license contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Part 70 license; or

- (d) The Department or EPA determines that the Part 70 license must be revised or revoked to assure compliance with the Applicable requirements.

The licensee shall furnish to the Department within a reasonable time any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the Part 70 license or to determine compliance with the Part 70 license.

- (8) No license revision or amendment shall be required, under any approved economic incentives, marketable licenses, emissions trading and other similar programs or processes for changes that are provided for in the Part 70 license.

STANDARD CONDITIONS

- (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 and this license (Title 38 MRSA §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 140;
- (3) 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; **Enforceable by State-only**
- (4) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 MRSA §353.
- (5) The licensee shall maintain and operate all emission units and air pollution control systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions; **Enforceable by State-only**
- (6) The licensee shall retain records of all required monitoring data and support information for a period of at least six (6) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the

- Part 70 license. The records shall be submitted to the Department upon written request or in accordance with other provisions of this license;
- (7) The licensee shall comply with all terms and conditions of the air emission license. The submission of notice of intent to reopen for cause by the Department, 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 the renewal of a Part 70 license or amendment shall not stay any condition of the Part 70 license.
- (8) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- (a) perform stack testing under circumstances representative of the facility's normal process and operating conditions:
 - i. 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;
 - ii. to demonstrate compliance with the applicable emission standards; or
 - iii. 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 CFR 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.

Enforceable by State-only

- (9) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicates emissions in excess of the applicable standards, then:
- (a) within thirty (30) days following receipt of such test results, 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 CFR 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.

Enforceable by State-only

- (10) The licensee shall maintain records of all deviations from license requirements. Such deviations shall include, but are not limited to malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emission unit itself that is not consistent with the terms and conditions of the air emission license.
 - a. The licensee shall notify the Commissioner within 48 hours of a violation in emission standards and/or a malfunction or breakdown in any component part that causes a violation of any emission standard, and shall report the probable cause, corrective action, and any excess emissions in the units of the applicable emission limitation;
 - b. The licensee shall submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component part causes a violation of any emission standard, together with any exemption requests.

Pursuant to 38 MRSA § 349(9), the Commissioner may exempt from civil penalty an air emission in excess of license limitations if the emission occurs during start-up or shutdown or results exclusively from an unavoidable malfunction entirely beyond the control of the licensee and the licensee has taken all reasonable steps to minimize or prevent any emission and takes corrective action as soon as possible. There may be no exemption if the malfunction is caused, entirely or in part, by poor maintenance, careless operation, poor design or any other reasonably preventable condition or

preventable equipment breakdown. The burden of proof is on the licensee seeking the exemption under this subsection.

- c. All other deviations shall be reported to the Department in the facility's semiannual report.
- (11) Upon the written request of 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 manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.
- (12) The licensee shall submit semiannual reports of any required periodic monitoring. All instances of deviations from Part 70 license requirements must be clearly identified in such reports. All required reports must be certified by a responsible official.
- (13) The licensee shall submit a compliance certification to the Department and EPA at least annually, or more frequently if specified in the applicable requirement or by the Department. The compliance certification shall include the following:
 - (a) The identification of each term or condition of the Part 70 license that is the basis of the certification;
 - (b) The compliance status;
 - (c) Whether compliance was continuous or intermittent;
 - (d) The method(s) used for determining the compliance status of the source, currently and over the reporting period; and
 - (e) Such other facts as the Department may require to determine the compliance status of the source;

SPECIAL CONDITIONS

- (14) Solid Waste Landfill and Flare
 - A. PTL is subject to the requirements of 40 CFR Part 60, Subparts A and WWW – Standards of Performance for Municipal Solid Waste Landfills that apply to landfills with a design capacity greater than 2.5 million cubic meters and NMOC emissions less than 50 megagrams/year. [40 CFR Part 60, Subparts A and WWW]

- B. PTL shall submit an annual NMOC emission report to the Department and EPA. If the estimated NMOC emission rate as reported in the annual report is less than 50 megagrams per year in each of the next 5 consecutive years, PTL may elect to submit an estimate of the NMOC emission rate for the next 5 year period in lieu of the annual report. These reports shall comply with the requirements of 40 CFR Part 60 §60.757(b)(1) and (2). [40 CFR Part 60, Subpart WWW]
- C. PTL shall retest the site-specific NMOC concentration every 5 years using the methods specified in 40 CFR Part 60 §60.754(a)(3).
[40 CFR Part 60, Subpart WWW]
- D. PTL shall keep readily accessible, on-site records of the following:
1. The design capacity report which demonstrated that the landfill had a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters.
 2. The current amount of solid waste in-place.
 3. The year-by-year waste acceptance rate.
- Off site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.
[40 CFR Part 60 §60.758(a)]
- E. PTL shall operate and maintain a landfill gas collection and control system except for periods of construction, maintenance or malfunctions of the system.
[MEDEP Chapter 140, BACT] **Enforceable by State-only**
- F. Opacity from the flare and from fugitive emissions from the landfill shall not exceed 20% on a 6-minute block average basis. [MEDEP Chapter 140 BACT]
- G. PTL shall not exceed a VOC emission rate of 49.9 tons per year based on a 12-month rolling total. [MEDEP Chapter 140, BACT] **Enforceable by State-only**

(15) **Operational Flexibility**

PTL may expand beyond the currently permitted design capacity of 3.89 million cubic meters without an amendment to this License provided all of the following are met:

- A. PTL submits to DEP and EPA an amended Design Capacity Report and a report identifying the recalculated NMOC emission rates for the next 5 years within 90 days after commencing construction on the permitted expansion;
- B. The recalculated NMOC actual emissions will remain less than 50 megagrams per year;
- C. PTL does not exceed a permitted emission rate of 49.9 tons per year of VOCs; and
- D. PTL continues to meet the emissions limits set forth in this License.

[MEDEP Chapter 140, BACT]

(16) **Generation Unit**

- A. PTL shall fire only landfill gas in the Generation unit.
[MEDEP Chapter 140, BPT]
- B. Emissions from the Generation unit shall not exceed the following based upon stack testing at the Department's request:

Pollutant	lb/MMBtu	g/bhp*hr	lb/hr
PM	0.05	--	0.62
PM ₁₀	0.05	--	0.62
SO ₂	--	--	0.45
NO _x	--	1.2	4.97
CO	--	2.4	9.93
VOC	--	0.4	1.66

[MEDEP Chapter 140, BPT]

- C. A log documenting the dates and hours of operation for the Generation Unit shall be kept on a monthly basis. [MEDEP Chapter 140, BPT]

- D. A log documenting any maintenance performed on the Generation unit shall be kept. [MEDPE Chapter 140, BPT]
- E. Visible emissions from the Generation unit shall not exceed 20% opacity on a 6 minute block average, except for no more than 2 six minute block averages in a continuous 3 hour period. [MEDEP Chapter 140, BPT]
- (17) **Periodic Monitoring**
Periodic monitoring for this license shall include maintaining the following records:
- A. The design capacity report which demonstrated that the landfill had a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters.
- B. The current amount of solid waste in-place.
- C. The year-by-year waste acceptance rate.
- D. The NMOC emission reports required by Condition 14(B).
[40 CFR Part 60, Subpart WWW]
- (18) **Semiannual Reporting**
The licensee shall submit semiannual reports every six months to the Bureau of Air Quality. The initial semiannual report is due January 31, 2004.
- A. Each semiannual report shall include a summary of the periodic monitoring required by this license.
- B. All instances of deviations from license requirements and the corrective action taken must be clearly identified and provided to the Department in summary form for each six-month interval.
[40 CFR Part 70]
- (19) **Annual Compliance Certification**
The licensee shall submit an annual compliance certification to the Department in accordance with Condition (13) of this license. The initial annual compliance certification is due January 31, 2004. [40 CFR Part 70]
- (20) **Annual Emission Statement**
In accordance with MEDEP Chapter 137, the licensee shall report annually to the Department the information necessary to accurately update the State's emission inventory by means of:
- 1) A computer program and accompanying instructions supplied by the Department;
- or

- 2) A written emission statement containing the information required in MEDEP Chapter 137.

Reports and questions should be directed to:

Attn: Criteria Emission Inventory Coordinator
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017
Phone: (207) 287-2437

The emission statement must be submitted by September 1 or as otherwise specified in Chapter 137.

(21) **Toxic Air Pollutants Emission Statement**

In accordance with MEDEP Chapter 137, the licensee shall report, no later than September 1, every two years (1996,1998,etc.) or in a timeframe designated to the Department, the information necessary to accurately update the State's toxic air pollutants emission inventory by means of a written emission statement containing the information required in MEDEP Chapter 137.

Reports and questions on the Air Toxics emissions inventory portion should be directed to:

Attn: Toxics Inventory Coordinator
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017

Phone: (207) 287-2437

- (22) The licensee is subject to the State regulations listed below.

<u>Origin and Authority</u>	<u>Requirement Summary</u>	<u>Enforceability</u>
Chapter 102	Open Burning	-
Chapter 109	Emergency Episode Regulation	-
Chapter 110	Ambient Air Quality Standard	-
Chapter 116	Prohibited Dispersion Techniques	-
38 M.R.S.A. Section 3 §585-B, sub-§5	Reduce Mercury Use and Emissions	Enforceable by State-only

