



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE  
GOVERNOR

PATRICIA W. AHO  
COMMISSIONER

**Tri-Community Recycling and  
Sanitary Landfill  
Aroostook County  
Fort Fairfield, Maine  
A-977-71-D-R**

**Departmental  
Findings of Fact and Order  
Air Emission License  
Renewal**

**FINDINGS OF FACT**

After review of the air emissions license renewal 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., §344 and §590, the Department finds the following facts:

**I. REGISTRATION**

**A. Introduction**

1. Tri-Community Recycling and Sanitary Landfill (TCL) has applied to renew the Air Emission License permitting the operation of emission sources associated with their landfill facility.
2. The previous license, A-997-71-A-N, included a VOC and HAP limit of 5.0 tons per year, however calculations submitted with the application for that license showed a VOC and HAP potential-to-emit of 10.3 tons per year. The VOC and HAP tons-per-year limits in this license reflect the limits from the calculations submitted with the application for A-997-71-A-N, ie, 10.3 tons per year.
3. The equipment addressed in this license is located at 303 Murphy Road, Fort Fairfield, ME.

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17 STATE HOUSE STATION  
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(207) 287-7688 FAX: (207) 287-7826  
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B. Emission Equipment

The following equipment is addressed in this air emission license:

**Emission Unit**

<u>Emission Unit</u>	<u>Maximum Capacity</u>	<u>Maximum Firing Rate</u>
Solid Waste Landfill	1.7 Megagrams	-
Landfill Gas Flare	7.5 MMBtu/hr	250 scfm

C. Application Classification

The application for TCL 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 CMR 115 (as amended).

**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 CMR 100 (as amended). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

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. Solid Waste Landfill and Flare**

TCL operates and maintains a municipal solid waste landfill with a maximum permitted design capacity of 1.7 megagrams. Uncontrolled emissions of VOC's from the landfill are estimated to be approximately 45 tons per year.

Because TCL's design capacity is less than 2.5 million megagrams and has a non-methane organic compound emission (NMOC) rate less than 50 megagrams per year, TCL is not subject to 40 CFR Part 60 Subpart Cc - *Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills*.

Because of its size, TCL is not subject to New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart WWW - *Standards of Performance for Municipal Solid Waste Landfills*, collection and control provisions, which apply to landfills greater than 2.5 megagrams; however reporting and recordkeeping requirements may apply to demonstrate the facility is below the Subpart WWW threshold.

TCL is not a major source, is not collocated with a major source, nor is it an area source with a design capacity greater than 2.5 million megagrams with an estimated uncontrolled emissions of NMOC equal to or greater than 50 megagrams per year, therefore TCL is not subject to 40 CFR Part 63 Subpart AAAA - *National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills*.

TCL operates a 7.5 MMBtu/hr landfill gas flare fed by a blower with a design capacity of 250 standard cubic feet (scf) per minute. The flare uses propane in the startup sequence to ignite the pilot which ignites the landfill gas, and has a destruction efficiency of 98%. BPT for the landfill gas flare shall be operating the flare in accordance with the manufacturer's specifications.

BPT for control of PM and PM<sub>10</sub> emissions shall be good combustion practices and operating the flare in accordance with the manufacturer's specifications. Visible emissions from the landfill gas flare shall not exceed five (5) percent opacity for five (5) minutes in any two (2) hour period. Compliance shall be determined by an aggregate of the individual fifteen (15) second observations which exceed five (5) percent in any two (2) hour period.

BPT for SO<sub>2</sub>, CO and NO<sub>x</sub> emissions shall be operating the flare in accordance with the manufacturer's specifications.

BPT for control of VOCs and HAPs from the landfill shall be the operation of a gas collection and control system with a 98% destruction efficiency. Uncontrolled VOC emissions from the landfill are estimated to be 45 tons per year. Testing shall be done once a year.

BPT limits for the landfill gas flare are:

- PM/PM<sub>10</sub> - 17 lb/10<sup>6</sup> scf methane produced; AP-42, T 2.4-5
- SO<sub>2</sub> - AP-42 Section 2.4.4.1 Equations (3) and (4)
- NO<sub>x</sub> - 40 lb/10<sup>6</sup> scf methane produced; AP-42, T 2.4-5
- CO - 750 lb/10<sup>6</sup> scf methane produced; AP-42, T 2.4-5
- VOC - LandGEM Results, Inventory year 2007, AP-42

Emissions shall not exceed the following [06-096 CMR 115, BPT]:

<b>Emission Unit</b>	<b>PM (lb/hr)</b>	<b>PM<sub>10</sub> (lb/hr)</b>	<b>SO<sub>2</sub> (lb/hr)</b>	<b>NO<sub>x</sub> (lb/hr)</b>	<b>CO (lb/hr)</b>	<b>VOC (lb/hr)</b>
Landfill Gas Flare	0.39	0.39	0.42	0.91	17.06	2.35

- Opacity
  - Visible emissions from the landfill gas flare shall not exceed five (5) percent opacity for five (5) minutes in any two (2) hour period.
  - Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity, except for no more than five (5) minutes in any one (1) hour period.

TCL shall meet a 75% uptime for the landfill gas flare on a 12-month rolling total basis; including, but not limited to, schedule or unscheduled maintenance and repair and equipment malfunction. Periods of downtime due to maintenance, repair, and malfunction shall not to exceed 2190 hours per 12-month period. TCL shall keep records documenting compliance with the uptime requirement.

In September 2010, TCL requested, and was granted, an amendment to its air emission license to reduce the frequency of testing the landfill gas for VOC and TRS (Total Reduced Sulfur) from twice a year, to once a year. At that time, TCL provided documentation that the analytical results from previous tests were very consistent, with levels of VOC and SO<sub>2</sub> well below license limits. Further, the landfill gas being combusted is gathered from a portion of the landfill no longer receiving waste thereby making generation, and thus VOC and TRS concentrations, very predictable.

C. Annual Emissions

1. Total Annual Emissions

TCL shall be restricted to the following annual emissions, based on a 12-month rolling total, and 8760 hours of operation per year.

**Total Licensed Annual Emissions for the Facility**

**Tons per year**

(Used to calculate the annual license fee)

	PM	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC	HAP
Land fill Gas Flare	1.7	1.7	1.9	4.0	74.7	-	-
Facility Wide Limit	-	-	-	-	-	10.3	10.3
<b>Total TPY</b>	<b>1.7</b>	<b>1.7</b>	<b>1.9</b>	<b>4.0</b>	<b>74.7</b>	<b>10.3</b>	<b>10.3</b>

2. Greenhouse Gases

Greenhouse gases are considered regulated pollutants as of January 2, 2011, through 'Tailoring' revisions made to EPA's *Approval and Promulgation of Implementation Plans*, 40 CFR Part 52, Subpart A, §52.21 Prevention of Significant Deterioration of Air Quality rule. Greenhouse gases, as defined in 06-096 CMR 100 (as amended), are the aggregate group of the following gases: Carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. For licensing purposes, greenhouse gases (GHG) are calculated and reported as carbon dioxide equivalents (CO<sub>2</sub>e).

Based on the facility's operating hours limit(s), the worst case emission factors from AP-42, IPCC (Intergovernmental Panel on Climate Change), and *Mandatory Greenhouse Gas Reporting*, 40 CFR Part 98, and the global warming potentials contained in 40 CFR Part 98, TCL is below the major source threshold of 100,000 tons of CO<sub>2</sub>e per year. Therefore, no additional licensing requirements are needed to address GHG emissions at this time.

### III. AMBIENT AIR QUALITY ANALYSIS

According to 06-096 CMR 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Modeling is not required for a renewal if the total emissions of any pollutant released do not exceed the following and there are no extenuating circumstances:

<b>Pollutant</b>	<b>Tons/Year</b>
PM	25
PM <sub>10</sub>	25
SO <sub>2</sub>	50
NO <sub>x</sub>	50
CO	250

Based on the total facility licensed emissions, TCL is below the emissions level required for modeling.

### 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-977-71-D-R subject to the following conditions.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License 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.

### **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 (38 M.R.S.A. §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 CMR 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 CMR 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 CMR 115]

- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353-A. [06-096 CMR 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 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 CMR 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 CMR 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 CMR 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 CMR 115]
- (11) 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 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 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.
- [06-096 CMR 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 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.
- [06-096 CMR 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 Part 70 license requirement. [06-096 CMR 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 CMR 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 CMR 115]

#### **SPECIFIC CONDITIONS**

(16) **Solid Waste Landfill and Flare**

A. TCL shall keep readily accessible, on-site records of the following:

1. The design capacity report which demonstrated that the landfill has a design capacity less than 2.5 megagrams and 2.5 million cubic meters.
2. The current amount of solid waste in place.

Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.  
[06-096 CMR 115, BPT]

B. Visible emission from the flare shall not exceed 5% opacity for five (5) minutes in any two (2) hour period, and fugitive emissions from any source (including stockpiles and roadways) shall not exceed 20% opacity except for no more than five (5) minutes in any one (1) hour period. [06-096 CMR 115, BPT]

- C. TCL shall meet a 75% uptime requirement for the landfill gas collection and control system based on a 12-month rolling total, including, but not limited to, scheduled or unscheduled maintenance and repair and equipment malfunction. Periods of downtime due to maintenance, repair, and malfunction shall not exceed 2190 hours per 12-month period). TCL shall keep records documenting compliance with the uptime requirement.
- D. TCL shall test the landfill gas for VOC and TRS concentrations at least once per calendar year. [06-096 CMR 115, BPT]
- E. If testing demonstrates an emission rate for any pollutant in excess of the emission limits associated with this license, TCL shall submit an application to amend the license as necessary within 90 days of the test date. [06-096 CMR 115, BPT]

(17) **Emissions**

- A. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

Emission Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Landfill Gas Flare	0.39	0.39	0.42	0.91	17.06	2.35

- B. Visible emissions from the flare shall not exceed 5% opacity for five (5) minutes in a two (2) hour period. Compliance shall be determined by an aggregate of the individual fifteen (15) second observations which exceed five (5) percent in any two (2) hour period. [06-096 CMR 115, BPT]

(18) **Fugitive Emissions**

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity, except for no more than five (5) minutes in any one (1) hour period. Compliance shall be determined by an aggregate of the individual fifteen (15) second opacity observations which exceed 20% in any one (1) hour. [06-096 CMR 101]

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- (19) TCL 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.A. §605).
- (20) If at any time the design capacity of TCL exceeds 2.5 million megagrams, TCL shall comply with the provisions of 40 CFR 60.752(b).

DONE AND DATED IN AUGUSTA, MAINE THIS 13 DAY OF June, 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:

*Patricia W. Aho*  
PATRICIA W. AHO, COMMISSIONER

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

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

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 03/12/2012

Date of application acceptance: 03/13/2012

Date filed with the Board of Environmental Protection:

This Order prepared by N. Lynn Cornfield, Bureau of Air Quality.

