



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
COMMISSIONER

**City of Augusta – Hatch Hill Landfill
Kennebec County
Augusta, Maine
A-1060-71-C-M**

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

FINDINGS OF FACT

After review of the air emissions 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 Annotated (M.R.S.A.), §344 and §590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

1. The City of Augusta – Hatch Hill Landfill (Hatch Hill) was issued Air Emission License A-1060-71-A-N on October 5, 2011 permitting the operation of emission sources associated with their landfill facility.
2. Hatch Hill has requested a minor revision to their license in order to revise their licensed SO₂ emission limits to 0.3 pound per hour and 1.3 tons per year, from the current limits of 0.11 pound per hour and 0.6 ton per year.
3. The equipment addressed in this license is located at Hatch Hill Road, Augusta.

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312 CANCO ROAD
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PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 760-3143

B. Emission Equipment

The following equipment is addressed in this air emission license:

Process Equipment

<u>Equipment</u>	<u>Design Capacity</u>	<u>Production Rate</u>	<u>Stack #</u>
Landfill Gas Flare	7.5 MMBtu/hr	300 scfm	1

C. Application Classification

This amendment will increase emissions by less than 4 tons per year for each single pollutant and less than 8 tons per year for all pollutants combined. Therefore, this modification is determined to be a minor revision and has been processed as such.

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. Explanation of Minor Revision Request

The City of Augusta owns and operates a municipal solid waste landfill, which includes an active landfill gas management system designed to control buildup of landfill gas beneath the cover system necessary for landfill closure and to prevent fugitive emissions of pollutants. The gas management system includes 12 landfill gas extraction wells and a landfill gas flare.

In accordance with Specific Condition (18) of air emission license A-1060-71-A-N, Hatch Hill has sampled the landfill gas for total sulfur (as hydrogen sulfide) thirteen (13) times. As demonstrated in documentation which accompanied the license amendment application, the hydrogen sulfide content of the landfill gas has varied significantly between tests, ranging from 31.5 ppmv to 156.2 ppmv (parts per million by volume). Despite analysis of test results and conditions at the time of sampling, no specific operational or atmospheric conditions could be identified as responsible for the variability in hydrogen sulfide test results, therefore, it is concluded the significant range in test results must arise from the internal landfill conditions, composition of the landfill waste and/or potential testing variability.

Based on testing results, hydrogen sulfide accounts for approximately 94.8% of the total sulfur in Hatch Hill's landfill gas. Conservatively assuming all sulfur in the landfill gas is oxidized to sulfur dioxide and the potential landfill gas throughput of 300 SCFM (standard cubic feet per minute), the maximum potential emission rate of SO₂ based on completed testing would be 0.3 pound per hour and 1.3 tons per year. Hatch Hill submitted complete calculations with the license amendment application to support these conclusions.

Hatch Hill is therefore requesting a minor revision to the currently licensed SO₂ emission limits, and proposes to comply with new SO₂ emission limits of 0.3 pound per hour and 1.3 tons per year. All other currently licensed emission limits remain unchanged.

The BACT analysis for the landfill gas collection system and flare, submitted with the application for the initial air emission license, will not be affected by the requested minor revision.

III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source shall be determined by the Department on a case-by case basis. In accordance with 06-096 CMR 115, an ambient air quality impact analysis is not required for a minor source if the total emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

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

The total facility licensed emissions 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.

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-1060-71-C-M subject to the conditions found in Air Emission License A-1060-71-A-N, and in 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.

SECTION II.(8) OF AIR EMISSION LICENSE A-1060-71-A-N SHALL BE AMENDED TO READ:

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

	<u>PM</u>	<u>PM₁₀</u>	<u>SO₂</u>	<u>NO_x</u>	<u>CO</u>	<u>VOC</u>
LFG Flare	0.5	0.5	1.3	1.1	21.1	3.7
Total TPY	0.5	0.5	1.3	1.1	21.1	3.7

**SPECIFIC CONDITION (16)B. OF AIR EMISSION LICENSE A-1060-71-A-N
SHALL BE AMENDED TO READ:**

(16) Landfill Gas Flare

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

Emission Unit	<u>PM</u> (lb/hr)	<u>PM₁₀</u> (lb/hr)	<u>SO₂</u> (lb/hr)	<u>NO_x</u> (lb/hr)	<u>CO</u> (lb/hr)	<u>VOC</u> (lb/hr)
LFG Flare	0.26	0.26	0.3	0.12	0.84	0.84

DONE AND DATED IN AUGUSTA, MAINE THIS 1 DAY OF May, 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:

Mauro Allen Robert Cove for
PATRICIA W. AHO, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-1060-71-A-N.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 03/13/2014

Date of application acceptance: 02/28/2014

Date filed with the Board of Environmental Protection:

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

