

<b>Northern Maine Crematory, Inc.</b>	)	<b>Departmental</b>
<b>Aroostook County</b>	)	<b>Findings of Fact and Order</b>
<b>Presque Isle, Maine</b>	)	<b>Air Emission License</b>
<b>A-746-71-C-R</b>		

After review of the air emission 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., Section 344 and Section 590, the Department finds the following facts:

**I. REGISTRATION**

A. Introduction

Northern Maine Crematory, Inc. (NMC) of Presque Isle, Maine has applied to renew their Air Emission License, permitting the operation of a Class IV-A crematory incinerator.

B. Equipment to be licensed:

Incinerator #1 is a Class IV-A Power-Pax II model IE-43-PPII crematory incinerator manufactured by IE & E Co. with the following specifications:

<b>Unit Number</b>	Incinerator #1
<b>Class Incinerator</b>	IV-A
<b>Make and Model</b>	Power-Pax II, model IE-43-PPII
<b>No. of Chambers</b>	2
<b>Type of Waste</b>	Type 1 & 4
<b>Max. Charge Rate</b>	800 lb/batch
<b>Max. Design (Combustion/Feed) Rate</b>	100 lb/hr
<b>Auxiliary Fuel Input:</b>	
<b>Primary Chamber (Btu/hr)</b>	1,500,000 firing LP Gas
<b>Secondary Chamber (Btu/hr)</b>	1,500,000 firing LP Gas
<b>Stack Flow Rate</b>	652 DSCFM
<b>Emission Control</b>	Afterburner
<b>Stack Number</b>	3

\* Incinerator #1 combustion gases vent to a 18-foot AGL (Above Ground Level) stack.

C. Application Classification

NMC has not proposed the licensing of increased emissions or the installation of new or modified equipment, therefore the license application is considered a renewal of existing licensed emission sources only.

**II BEST PRACTICAL TREATMENT**

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 (last amended December 1, 2005). 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 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. Incinerator #1

NMC owns and operates a Class IV-A Power-Pax II model IE-43-PPII crematory incinerator manufactured by IE & E Co. at NMC's Presque Isle, Maine crematory. The incinerator, designated Incinerator #1, has a maximum destruction rate of 100 pounds per hour (lb/hr) firing LP fuel. Typically, NMC combusts approximately 800 pounds per batch and conducts approximately 400 cremations per year.

The auxiliary burners have maximum heat input ratings of 1,500,000 British thermal units per hour (Btu/hr) for the primary and secondary chambers each firing LP fuel.

This source was previously subject to Best Available Control Technology (BACT) requirements. The former BACT determination is now considered Best Practical Treatment for this source. BPT for the Class IV-A incinerator includes the following:

BPT for the incinerator requires that the operating temperature in the secondary chamber or refractory lined stack shall be maintained at or above 1600°F with a stack gas retention time, at or above 1600°F, for at least 0.5 seconds.

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 a minimum of 1200°F and increased to 1600°F prior to commencing the burn cycle.

Once the burn cycle has commenced by introduction of primary chamber combustion, the incinerator 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 1600°F in the secondary chamber.

A pyrometer and ¼ inch test port shall be maintained at the location of the incinerator or refractory lined stack, which provides sufficient volume to insure a flue gas retention time of not less than 0.5 seconds at the minimum of 1600°F.

A log will be maintained recording the weight of the charge, preheat time, charging time and the temperature of the secondary chamber every 60 minutes after start-up, until, and including, final shutdown time. The facility shall make use of the chart recorder chart to record the start time, date, and weight charged.

A maximum particulate emission rate of 0.20 gr/dscf corrected to 12% CO<sub>2</sub> will be met.

Visible emissions from the incinerator shall not exceed 10% opacity based on a (6) six-minute block average basis.

The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License.

A summary of the BPT analysis for Incinerator #1 is as follows:

1. *Fuel Burning Equipment Particulate Emission Standard*, 06-096 CMR 103, (last amended November 3, 1990) regulates PM emission limits. However, BPT for crematory incinerators establishes the PM emission limit of 0.2 grs/dscf. PM<sub>10</sub> emission limits are derived from PM limits.

2. SO<sub>2</sub>, NO<sub>x</sub>, CO and VOC emission limits are based upon AP-42 data dated 10/96 for the burning of #2 fuel oil and 1/95 for the operation of waste incinerators.
3. Visible emissions from Stack #1 are subject to *Visible Emissions Regulation*, 06-096 CMR 101 (last amended May 18, 2003). Visible emissions from the incinerator shall not exceed 10% opacity based on a (6) six-minute block average basis.

Total annual emissions and hourly emissions limits were calculated using updated US Environmental Protection Agency's Compilation of Air Pollutant Emission Factors, AP-42.

#### C. Annual Emissions Restrictions

- Total annual emissions calculated based on firing a maximum 50,000 gallons of LP fuel per year.

**Total Allowable Annual Emission for the Facility**  
(used to calculate the annual license fee)

<b>Pollutant</b>	<b>Tons/Year</b>
PM	0.3
PM <sub>10</sub>	0.3
SO <sub>2</sub>	0.1
NO <sub>x</sub>	0.5
CO	0.2
VOC	0.02

### III. AIR QUALITY ANALYSIS

According to *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (last amended December 1, 2005), the level of air quality analysis and monitoring are determined on a case-by-case basis. Based on analysis for similar sources, the size of the source, the allowable emissions, the location, and the stack height, ambient air quality standards, including increments, are not expected to be violated. Therefore, an ambient air impact analysis will not be required for this source at this time.

### **ORDER**

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

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

The Department hereby grants Air Emission License A-746-71-C-R, subject to the following conditions:

Severability: The invalidity or unenforceability of any provision, or part thereof, of this Air Emission License shall not affect the remainder of the provisions or any other provisions. This Air Emission License shall be construed and enforced in all respects as of 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 (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 06-096 CMR 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.
- (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:
  - (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
    - a. 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
    - b. pursuant to any other requirement of this license to perform stack testing.
  - (ii) 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

- (iii) 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:
- (i) 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
  - (ii) 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
  - (iii) 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 emission 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) A log shall be maintained recording the weight of charge, preheating time, charging time, afterburner temperature directly after charging and every 60 minutes after startup until, and including, final shutdown time.  
[06-096 CMR 115, BPT]
- (17) The secondary chamber of the incinerator shall be preheated to a minimum of 1200°F and increased to 1600°F prior to commencing the burn cycle and shall be maintained at a minimum of 1600°F during the duration of the burn cycle.  
[06-096 CMR 115, BPT]
- (18) A pyrometer and ¼ inch test port shall be maintained at that location of the incinerator or refractory lined stack which provides sufficient volume to insure a flue gas retention time of not less than 0.5 seconds at the minimum of 1600°F.  
[06-096 CMR 115, BPT]
- (19) NMC shall not exceed a particulate matter emission limit of 0.2 gr/dscf corrected to 12% CO<sub>2</sub> from the auxiliary fuel. Therefore, based on the maximum design combustion rate and continuous operation of the Class IV-A incinerator, emissions shall be limited to the following:

<b>Pollutant</b>	<b>gr/dscf</b>	<b>lb/hr</b>	<b>Ton/yr</b>
<b>PM</b>	0.2	0.4	0.3
<b>PM<sub>10</sub></b>	-	0.4	0.3
<b>SO<sub>2</sub></b>	-	0.2	0.1
<b>NO<sub>x</sub></b>	-	0.6	0.5
<b>CO</b>	-	0.2	0.2
<b>VOC</b>	-	0.02	0.02

[06-096 CMR 115, BPT]

- (20) Visible emissions from the incinerator shall not exceed an opacity limit of 10%, based on a (6) six-minute block average basis. [06-096 CMR 101]

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Findings of Fact and Order  
Air Emission License**

- (21) The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications, and shall be familiar with the terms of this Air Emission as it pertains to the operation of the incinerator. [06-096 CMR 115, BPT]
- (22) NMC shall operate, in good working order, a chart-recording device to document compliance with the temperature requirements of this license. For each burn cycle, the chart shall have documented on it the start time, date and weight of the charge. [06-096 CMR 115, BPT]

DONE AND DATED IN AUGUSTA, MAINE THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ 2008.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
DAVID P. LITTELL, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

The term of this Order shall be for five (5) years from the signature above

Date of initial receipt of application: **April 7, 2008**

Date of application acceptance: **April 18, 2008**

Date filed with the Board of Environmental Protection: \_\_\_\_\_

This Order prepared by, Peter G. Carleton, Bureau of Air Quality