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

Brooklawn Memorial Park	**|**	**Departmental**
Cumberland County	**|**	**Findings of Fact and Order**
Portland, Maine	**|**	**Air Emission License**
A-48-71-M-R	**|**	**Renewal**

Findings of Fact

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 Maine Revised Statutes (M.R.S.) § 344 and § 590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. Registration

A. Introduction

Brooklawn Memorial Park (Brooklawn) has applied to renew their Air Emission License for the operation of five Class IV-A crematory incinerators.

The equipment addressed in this license is located at 2002 Congress Street, Portland, Maine.

B. Emission Equipment

Brooklawn operates five crematory incinerators identified as Unit 1, Unit 2, Unit 98, Unit 2K, and Unit 20.

Units 1 and 2 are Model IE43-PP Power-Pak crematory incinerators, each manufactured and installed in 1984, with the following specifications:

Class Incinerator	IV-A
No. of Chambers	2
Type of Waste	Type 4
Max. Design Combustion Rate	150 lb per hour
Max. Actual Feed Rate	300 lb per charge
Auxiliary Fuel Input:	Natural Gas
Primary Chamber (MMBtu/hr)	0.75
Secondary Chamber (MMBtu/hr)	0.85
Emission Control	Afterburner

Unit 1 and Unit 2 vent combustion gases to Stack #1 and Stack #2, respectively, both of which are 33 feet Above Ground Level (AGL).

Units 98 and 2K are Model IE43SSP Super Power-Pak crematory incinerators. Unit 98 was manufactured and installed in 1998, and Unit 2K was manufactured and installed in 2000. Each unit has the following specifications:

Class Incinerator	IV-A
No. of Chambers	2
Type of Waste	Type 4
Max. Design Combustion Rate	200 lb per hour
Max. Actual Feed Rate	800 lb per charge
Auxiliary Fuel Input:	Natural Gas
Primary Chamber (MMBtu/hr)	1.5
Secondary Chamber (MMBtu/hr)	1.5
Emission Control	Afterburner

Unit 98 and Unit 2K vent combustion gases to Stack #3 and Stack #4, respectively, both of which are 22 feet AGL.

Unit 20 is a Model IE43SPP Plus with the following specifications:

Class Incinerator	IV-A
No. of Chambers	2
Type of Waste	Type 4
Max. Design Combustion Rate	225 lb/hr
Max. Actual Feed Rate	750 lb per charge
Auxiliary Fuel Input:	Natural Gas
Primary Chamber (MMBtu/hr)	1.5
Secondary Chamber (MMBtu/hr)	1.5
Emission Control	Afterburner

Unit 20 vents combustion gases to Stack #5, a 22-foot AGL stack. This represents 60% of the formula Good Engineering Practice (GEP) stack height.

Brooklawn is also equipped with an emergency generator with the following specifications:

Equipment	Max. Input Capacity	Rated Output Capacity	Fuel Type	Firing Rate	Date of Manuf.	Date of Install.
Emergency Generator	0.6 MMBtu/hr *	49.2 kW	Natural Gas	584 scf/hr	2/2006	6/2006

* Re-estimated maximum input capacity based on fuel consumption from engine specification sheet.

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.

The application for Brooklawn 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 Code of Maine Rules (C.M.R.) ch. 115.

D. Facility Classification

The facility is licensed as follows:

- As a natural minor source of criteria pollutants, because no license restrictions are necessary to keep facility emissions below major source thresholds for criteria pollutants; and
- As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for HAP.

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 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. Crematory Incinerators: Unit 1, Unit 2, Unit 98, Unit 2K, and Unit 20

BPT for the crematory incinerators are the following:

1. Emission Limits

Emissions information is based on a licensed allowed particulate matter emission limit of 0.10 gr/dscf, corrected to 12% CO_2, the burning of natural gas as an auxiliary fuel, and use of emission factors as described below.

The BPT emissions from the natural gas burner portion of the total exhaust were based on the following:

$PM/PM_{10}/PM_{2.5}$ – 0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
SO_2 – 0.6 lb/MMscf, AP-42 Table 1.4-2 dated 4/26
NO_x – 100 lb/MMscf, AP-42 Table 1.4-1 dated 4/26
CO – 84 lb/MMscf, AP-42 Table 1.4-1 dated 4/26
VOC – 5.5 lb/MMscf, AP-42 Table 1.4-2 dated 4/26

The BPT emissions from the biomedical portion of the total exhaust were based on the following:

$PM/PM_{10}/PM_{2.5}$ – 4.67 lb/ton, AP-42 Table 2.3-2 dated 7/93
SO_2 – 2.17 lb/ton, AP-42 Table 2.3-1 dated 7/93
NO_x – 3.56 lb/ton, AP-42 Table 2.3-1 dated 7/93
CO – 2.95 lb/ton, AP-42 Table 2.3-1 dated 7/93
VOC – 0.299 lb/ton, AP-42 Table 2.3-2 dated 7/93

The pound per hour BPT emissions for Units 1 and 2 are each as follows:

	PM (lb/hr)	**PM_{10} (lb/hr)**	**$PM_{2.5}$ (lb/hr)**	**SO_2 (lb/hr)**	**NO_x (lb/hr)**	**CO (lb/hr)**	**VOC (lb/hr)**
Fuel Combustion	0.08	0.08	0.08	-	0.16	0.13	0.01
Biomedical Portion	0.35	0.35	0.35	0.16	0.27	0.22	0.02
Total Emission Limit	**0.43**	**0.43**	**0.43**	**0.16**	**0.43**	**0.35**	**0.03**

The pound per hour BPT emissions for Units 98 and 2K are each as follows:

	PM (lb/hr)	**PM_{10} (lb/hr)**	**$PM_{2.5}$ (lb/hr)**	**SO_2 (lb/hr)**	**NO_x (lb/hr)**	**CO (lb/hr)**	**VOC (lb/hr)**
Fuel Combustion	0.15	0.15	0.15	-	0.29	0.24	0.02
Biomedical Portion	0.47	0.47	0.47	0.22	0.36	0.30	0.03
Total Emission Limit	**0.62**	**0.62**	**0.62**	**0.22**	**0.65**	**0.54**	**0.05**

The pound per hour BPT emissions for Unit 20 are as follows:

	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_X (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Fuel Combustion	0.15	0.15	0.15	-	0.29	0.24	0.02
Biomedical Portion	0.53	0.53	0.53	0.24	0.40	0.33	0.03
Total Emission Limit	**0.68**	**0.68**	**0.68**	**0.24**	**0.69**	**0.57**	**0.05**

Visible emissions from the crematory incinerator stacks shall each not exceed 10% opacity based on a six-minute block average basis.

2. Operating Parameters

   a. Operating temperature in the secondary chamber shall be maintained at or above 1,600 ºF for the duration of the burn cycle, with a stack gas retention time of at least 1.0 second at or above 1,600 ºF.
   b. 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 at least 1,200 ºF.
   c. No remains shall be introduced into the primary chamber until the temperature in the secondary chamber has reached 1,200 °F.
   d. Once the burn cycle has commenced by introduction of primary chamber combustion, the cremator 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 1,600 °F in the secondary chamber.
   e. A pyrometer and ¼-inch test port shall be installed and maintained at that location of the cremator or refractory lined stack which provides sufficient volume to insure a flue gas retention time of not less than 1.0 second at a minimum of 1,600 ºF.
   f. A log shall be maintained recording the weight of the remains, preheat time, charging time and the temperature of the secondary chamber every 60 minutes after start-up until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight charged shall be logged on the chart.
   g. The cremator operator(s) shall receive adequate training to operate the cremator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License.

C. Emergency Generator

Brooklawn operates a Kohler emergency generator, Emergency Generator, which is a generator set consisting of an engine and an electrical generator. Emergency Generator has an engine rated at 0.6 MMBtu/hr which fires natural gas. The Emergency Generator was manufactured in February of 2006 and installed in June of 2006.

1. BPT Findings

The BPT emission limits for the generator are based on the following:

$PM/PM_{10}/PM_{2.5}$ – 9.99E-3 lb/MMBtu from AP-42 Table 3.2-2 dated 4/25
SO_2 – 5.88E-4 lb/MMBtu from AP-42 Table 3.2-2 dated 4/25
NO_x – 4.08 lb/MMBtu from AP-42 Table 3.2-2 dated 4/25
CO – 0.557 lb/MMBtu from AP-42 Table 3.2-2 dated 4/25
VOC – 0.118 lb/MMBtu from AP-42 Table 3.2-2 dated 4/25
Visible Emissions – 06-096 C.M.R. ch. 101

The BPT emission limits for Emergency Generator are the following:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Emergency Generator	0.01	0.01	0.01	-	2.45	0.33	0.07

Visible emissions from Emergency Generator shall not exceed 20% opacity on a six-minute block average basis.

2. Chapter 169

Emergency Generator was installed prior to the effective date of *Stationary Generators*, 06-096 C.M.R. ch. 169 and is therefore exempt from this rule pursuant to section 1.

3. New Source Performance Standards (NSPS)

Due to the date of manufacture of the spark ignition emergency engine, Emergency Generator, the engine is not subject to the New Source Performance Standards (NSPS) *Standards of Performance for Spark Ignition Internal Combustion Engines (SI ICE),* 40 C.F.R. Part 60, Subpart JJJJ since the unit was manufactured prior to January 1, 2009. [40 C.F.R. § 60.4230]

4. National Emission Standards for Hazardous Air Pollutants (NESHAP): 40 C.F.R. Part 63, Subpart ZZZZ

National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 C.F.R. Part 63, Subpart ZZZZ is applicable to Emergency Generator. The unit is considered an existing, emergency stationary reciprocating internal combustion engine at an area HAP source and is not subject to New Source Performance Standards regulations. EPA's August 9, 2010 memo (*Guidance Regarding Definition of Residential, Commercial, and Institutional Emergency Stationary RICE in the NESHAP for Stationary RICE*) specifically does not exempt these units from the federal requirements. [40 C.F.R. § 63.6585]

A summary of the currently applicable federal 40 C.F.R. Part 63, Subpart ZZZZ requirements is listed below.

a. Emergency Engine Designation and Operating Criteria

Under 40 C.F.R. Part 63, Subpart ZZZZ, a stationary reciprocating internal combustion engine (RICE) is considered an **emergency** stationary RICE (emergency engine) as long as the engine is operated in accordance with the following criteria. Operation of an engine outside of the criteria specified below may cause the engine to no longer be considered an emergency engine under 40 C.F.R. Part 63, Subpart ZZZZ, resulting in the engine being subject to requirements applicable to **non-emergency** engines.

(1) Emergency Situation Operation (On-Site)

There is no operating time limit on the use of an emergency engine to provide electrical power or mechanical work during an emergency situation. Examples of use of an emergency engine during emergency situations include the following:

- Use of an engine to produce power for critical networks or equipment (including power supplied to portions of a facility) because of failure or interruption of electric power from the local utility (or the normal power source, if the facility runs on its own power production);
- Use of an engine to mitigate an on-site disaster;
- Use of an engine to pump water in the case of fire, flood, natural disaster, or severe weather conditions; and
- Similar instances.

(2) Non-Emergency Situation Operation

An emergency engine may be operated up to a maximum of 100 hours per calendar year for maintenance checks, readiness testing, and other non-emergency situations as described below.

(i) An emergency engine may be operated for a maximum of 100 hours per calendar year for maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government; the manufacturer; the vendor; the regional transmission organization or equivalent balancing authority and transmission operator; or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE more than 100 hours per calendar year.

(ii) An emergency engine may be operated for up to 50 hours per calendar year for other non-emergency situations. **However, these operating hours are counted as part of the 100 hours per calendar year operating limit described in paragraph (2) and (2)(i) above.**

The 50 hours per calendar year operating limit for other non-emergency situations cannot be used for peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

Emergency Generator shall be limited to the usage outlined in 40 C.F.R. § 63.6640(f) and therefore may be classified as an existing emergency stationary RICE as defined in 40 C.F.R. Part 63, Subpart ZZZZ. Failure to comply with all of the requirements listed in 40 C.F.R. § 63.6640(f) may cause this engine to not be considered an emergency engine and therefore subject to all applicable requirements for non-emergency engines.

b. 40 C.F.R. Part 63, Subpart ZZZZ Requirements

(1) Operation and Maintenance Requirements

(i) Brooklawn shall meet the following operational limitations for the spark ignition emergency engine (Emergency Generator):

a. Change the oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first;
b. Inspect the spark plugs every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and
c. Inspect the hoses and belts every 500 hours or operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary

Records shall be maintained documenting compliance with the operational limitations.

[40 C.F.R. § 63.6603(a) and Table 2(d); and 06-096 C.M.R. ch. 115]

(ii) The engine shall be operated and maintained according to the manufacturer's emission-related written instructions, or Brooklawn shall develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 C.F.R. § 63.6625(e)]

(2) Optional Oil Analysis Program

Brooklawn has the option of utilizing an oil analysis program which complies with the requirements of § 63.6625(i) in order to extend the specified oil change requirement. If this option is used, Brooklawn must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 C.F.R. § 63.6625(i)]

(3) Non-Resettable Hour Meter Requirement

A non-resettable hour meter shall be installed and operated on the engine. [40 C.F.R. § 63.6625(f)]

(4) Startup Idle and Startup Time Minimization Requirements
During periods of startup the facility must minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 C.F.R. § 63.6625(h) and 40 C.F.R. Part 63, Subpart ZZZZ Table 2d]

(5) Annual Time Limit for Maintenance and Testing
As an emergency engine, Emergency Generator shall be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity). [40 C.F.R. § 63.6640(f)]

(6) Recordkeeping
Brooklawn shall keep records that include maintenance conducted on the engine and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the number of hours the unit operated for emergency purposes, the number of hours the unit operated for non-emergency purposes, and the reason the engine was in operation during each time. [40 C.F.R. § 63.6655(f)]

D. 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. Maximum potential emissions were calculated based on the following assumptions:

- Hourly emission limits for the five crematory incinerators:
  - 1,300 charges per year each for Units 1 and 2 (or 2,600 hours of operation each with maximum charge per year);
  - 2,000 charges per year each for Units 98 and 2K (or 8,000 hours of operation each with maximum charge per year);
  - 2,000 charges per year each for Unit 20 (or 6,667 hours of operation with maximum charge per year); and
- 100 hours/year non-emergency operation of Emergency Generator.

This information does not represent a comprehensive list of license restrictions or permissions. That information is provided in the Order section of this license.

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

	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO	VOC
Units 1 and 2	1.1	1.1	1.1	0.4	1.1	0.9	0.1
Units 98 and 2K	4.9	4.9	4.9	1.7	5.2	4.3	0.4
Unit 20	2.3	2.3	2.3	0.8	2.3	1.9	0.2
Emergency Generator	-	-	-	-	0.1	-	-
Total TPY	**8.3**	**8.3**	**8.3**	**2.9**	**8.7**	**7.1**	**0.7**

Pollutant	Tons/year
Single HAP	7.9
Total HAP	19.9

III. Ambient Air Quality Analysis

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

Pollutant	Tons/Year
PM_{10}	25
$PM_{2.5}$	15
SO_2	50
NO_x	50
CO	250

The total licensed annual emissions for the facility 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.

This determination is based on information provided by the applicant regarding licensed emission units. If the Department determines that any parameter (e.g., stack size, configuration, flow rate, emission rates, nearby structures, etc.) deviates from what was included in the application, the Department may require Brooklawn to submit additional information and may require an ambient air quality impact analysis at that time.

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-48-71-M-R subject to the following conditions.

Severability. The invalidity or unenforceability of any provision of this License or part thereof 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. § 347-C).

(2) The licensee shall acquire a new or amended air emission license prior to beginning actual construction of a modification, unless specifically provided for in Chapter 115. [06-096 C.M.R. ch. 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 C.M.R. ch. 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 C.M.R. ch. 115]

(5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S. § 353-A. [06-096 C.M.R. ch. 115] Payment of the annual air emission license fee for Brooklawn is due by the end of November of each year. [38 M.R.S. § 353-A(3)]

(6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 C.M.R. ch. 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 C.M.R. ch. 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 C.M.R. ch. 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 C.M.R. ch. 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 C.M.R. ch. 115]

(11) In accordance with the Department's air emission compliance test protocol and 40 C.F.R. 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 C.F.R. 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 C.M.R. ch. 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 the written test report by the Department, or another alternative timeframe approved by the Department, 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 C.F.R. 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 C.M.R. ch. 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 license requirement. [06-096 C.M.R. ch. 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 C.M.R. ch. 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 C.M.R. ch. 115]

(16) The licensee 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. § 605). [06-096 C.M.R. ch. 115]

Specific Conditions

(17) **Crematory Incinerators: Unit 1, Unit 2, Unit 98, Unit 2K, and Unit 20**

A. The crematory incinerators shall be used for the disposal of type 4 waste and shall not be used for the disposal of plastics, cytotoxic (antineoplastic) drugs or any radioactive wastes and shall not be used to dispose of any medical waste classified as type 7 waste, as defined in 06-096 C.M.R. ch. 100. [06-096 C.M.R. ch. 115, BPT]

B. The crematory incinerators each shall not exceed the unit's maximum design combustion rates. Auxiliary fuel inputs to the primary and secondary chambers shall be natural gas. Compliance shall be demonstrated through fuel receipts. [06-096 C.M.R. ch. 115, BPT]

C. The cremator shall not exceed a particulate matter emission limit of 0.10 gr/dscf, corrected to 12% CO_2. Licensed allowed emissions for the crematory incinerators shall not exceed the following:

Cremator Emission Limits lb/hr
(per cremator)

	Unit 1	Unit 2	Unit 98	Unit 2K	Unit 20
PM	0.43	0.43	0.62	0.62	0.68
PM_{10}	0.43	0.43	0.62	0.62	0.68
$PM_{2.5}$	0.43	0.43	0.62	0.62	0.68
SO_2	0.16	0.16	0.22	0.22	0.24
NOx	0.43	0.43	0.65	0.65	0.69

	Unit 1	Unit 2	Unit 98	Unit 2K	Unit 20
CO	0.35	0.35	0.54	0.54	0.57
VOC	0.03	0.03	0.05	0.05	0.05

Compliance shall be demonstrated through stack testing by request of the Department, in accordance with the appropriate method found in 40 C.F.R. Part 60, Appendix A. [06-096 C.M.R. ch. 115, BPT]

D. Visible emissions from the stacks of the crematory incinerators shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

E. Operating temperature in the secondary chamber shall be maintained at or above 1,600 ºF for the duration of the burn cycle with a stack gas retention time of at least 1.0 second. [06-096 C.M.R. ch. 115, BPT]

F. 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 at least 1,200 ºF. [06-096 C.M.R. ch. 115, BPT]

G. No remains shall be introduced into the primary chamber until the temperature in the secondary chamber has reached 1,200 °F. [06-096 C.M.R. ch. 115 BPT]

H. Once the burn cycle has commenced by introduction of primary chamber combustion, the cremator 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 1,600 ^{0}F in the secondary chamber. The temperature in the secondary chamber shall be maintained at a minimum of 1,600 ºF for the duration of the burn cycle. [06-096 C.M.R. ch. 115, BPT]

I. A pyrometer and ¼-inch test port shall be installed and maintained at that location of the cremator or refractory lined stack which provides sufficient volume to insure a flue gas retention time of not less than 1.0 second at a minimum of 1,600 ºF. [06-096 C.M.R. ch. 115, BPT]

J. Each cremator shall not exceed the unit's maximum design combustion rates. To ensure compliance, a log shall be maintained recording the weight of the remains, preheat time, charging time and the temperature of the secondary chamber every 60 minutes after start-up until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight charged may be logged on the chart. [06-096 C.M.R. ch. 115, BPT]

K. The cremator operator(s) shall receive adequate training to operate the cremator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License. [06-096 C.M.R. ch. 115, BPT]

(18) **Emergency Generator**

A. Emergency Generator shall only fire natural gas. [06-096 C.M.R. ch. 115, BPT]

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

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Emergency Generator	0.01	0.01	0.01	-	2.45	0.33	0.07

C. Visible Emissions

Visible emissions from Emergency Generator shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

D. Emergency Generator shall meet the applicable requirements of 40 C.F.R. Part 63, Subpart ZZZZ, including the following: [incorporated under 06-096 C.M.R. ch. 115, BPT]

1. Brooklawn shall meet the following operational limitations for the spark ignition emergency engine (Emergency Generator):

   a. Change the oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first;
   b. Inspect the spark plugs every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and
   c. Inspect the hoses and belts every 500 hours or operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary.

   Records shall be maintained documenting compliance with the operational limitations.

   [40 C.F.R. § 63.6603(a) and Table 2(d); and 06-096 C.M.R. ch. 115]

2. Oil Analysis Program Option
   Brooklawn has the option of utilizing an oil analysis program which complies with the requirements of § 63.6625(i) in order to extend the specified oil change requirement. If this option is used, Brooklawn must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for each engine. The analysis program must be part of the maintenance plan for each engine. [40 C.F.R. § 63.6625(i)]

3. Non-Resettable Hour Meter
   A non-resettable hour meter shall be installed and operated on the engine. [40 C.F.R. § 63.6625(f)]

4. Maintenance, Testing, and Non-Emergency Operating Situations

   a. As an emergency engine, Emergency Generator shall be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise to supply power as part of a financial arrangement with another entity). These limits are based on a calendar year. Compliance shall be demonstrated by records (electronic or written logs) of all engine operating hours. [40 C.F.R. § 63.6640(f) and 06-096 C.M.R. ch. 115]

   b. Brooklawn shall keep records that include maintenance conducted on the engine and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the number of hours the unit operated for emergency purposes, the number of hours the unit operated for non-emergency purposes, and the reason the engine was in operation during each time.
      [40 C.F.R. §§ 63.6655(e) and (f)]

5. Operation and Maintenance
   The engine shall be operated and maintained according to the manufacturer's emission-related written instructions, or Brooklawn shall develop a maintenance plan which provides to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 C.F.R. § 63.6625(e)]

   Brooklawn shall have available for review by the Department a copy of the manufacturer's emission-related written instructions for engine operation and maintenance. [06-096 C.M.R. ch. 115, BPT]

6. Startup Idle and Startup Time Minimization
   During periods of startup, the facility must minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 C.F.R. § 63.6625(h) & 40 C.F.R. Part 63, Subpart ZZZZ Table 2d]

(19) **Additional Information**

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, Brooklawn may be required to submit additional information. Upon written request from the Department, Brooklawn shall provide information necessary to demonstrate ambient air quality standards (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 18th day of JUNE, 2026.

Department of Environmental Protection

BY:_____
for Melanie Loyzim, Commissioner

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

[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: December 26, 2024
Date of application acceptance: December 26, 2024

This Order prepared by Zac Hicks, Bureau of Air Quality.