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

DEPARTMENT ORDER

Department of Corrections **Maine State Prison** **Knox County** **Warren, Maine** **A-808-71-F-N (SM)**	**Departmental** **Findings of Fact and Order** **Air Emission License** **After the Fact 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

The Air Emission License for Maine State Prison, operated by the Maine Department of Corrections, expired on 10/05/2016. Maine State Prison has applied to renew its air emission license for the operation of emission sources associated with its correctional facility.

The equipment addressed in this license is located at 807 Cushing Rd, Warren, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Boilers

Equipment	Max. Input Capacity (MMBtu/hr)	Max. Firing Rate (gal/hr)	Fuel Type, % sulfur	Date of Manuf.	Date of Install.	Stack #
Boiler 1	20.4	145.8	Distillate fuel, 0.5% by weight	2000	2000	1
Boiler 2	20.4	145.8	Distillate fuel, 0.5% by weight	2000	2000	1
Boiler 3	20.4	145.8	Distillate fuel, 0.5% by weight	2000	2000	1
Boiler 4	8.2	58.3	Distillate fuel, 0.5% by weight	2000	2000	1

Generators

Equipment	Max. Input Capacity (MMBtu/hr)	Rated Output Capacity (kW)	Fuel Type, % sulfur	Max. Firing Rate (gal/hr)	Date of Manuf.	Date of Install.
Generator 1	15.4	1500	Distillate fuel, 0.5% by weight	110.2	2000	2000
Generator 2	15.4	1500	Distillate fuel, 0.5% by weight	110.2	2000	2000

C. Definitions

Distillate Fuel. For the purposes of this license, *distillate fuel* means the following:

- Fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials (ASTM) in ASTM D396;
- Diesel fuel oil numbers 1 or 2, as defined in ASTM D975;
- Kerosene, as defined in ASTM D3699;
- Biodiesel, as defined in ASTM D6751; or
- Biodiesel blends, as defined in ASTM D7467.

D. Application Classification

All rules, regulations, or statutes referenced in this air emission license refer to the amended version in effect as of the issued date of this license.

The previous air emission license for Maine State Prison expired on 10/05/2016. A complete application was not submitted prior to the expiration date; therefore, Maine State Prison is considered to be an existing source applying for an after-the-fact renewal. The Department has determined the facility is a minor source, and the application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (C.M.R.) ch. 115.

With the annual fuel limit on the boilers and the operating hour restrictions on the emergency generators, the facility is licensed below the major source thresholds for criteria pollutants and is considered a synthetic minor. The facility has negligible emissions of hazardous air pollutants and is also considered an area source of 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 an after-the-fact renewal requires an analysis similar to a Best Available Control Technology analysis per 06-096 C.M.R. ch. 115.

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. Boilers 1-4

Maine State Prison operates Boilers 1-4 for heat and hot water. Boilers 1-3 are identical, each with a rated maximum heat input capacity of 20.4 MMBtu/hr, and Boiler 4 is rated at 8.2 MMBtu/hr. The boilers were all installed in 2000, they fire distillate fuel, and they exhaust through one shared stack.

1. BPT Analysis

The BPT emission limits for the boilers were based on the following:

Distillate Fuel

PM	0.04 lb/MMBtu A-808-71-A-N (01/02/2001)
PM_{10}	0.04 lb/MMBtu A-808-71-A-N (01/02/2001)
SO_2	0.5 lb/MMBtu based on the firing of distillate fuel with a sulfur content of 0.5% by weight
NO_x	20 lb/1000gal Based on AP-42 table 1.3-1, dated 05/10

CO	5 lb/1000gal Based on AP-42 table 1.3-1, dated 05/10
VOC	0.34 lb/1000gal Based on AP-42 table 1.3-1, dated 05/10
Visible Emissions	06-096 C.M.R. ch. 115, BPT

The BPT emission limits for the boilers are the following:

Unit	Pollutant	lb/MMBtu
Boiler 1	PM	0.04
Boiler 2	PM	0.04
Boiler 3	PM	0.04
Boiler 4	PM	0.04

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler 1 distillate fuel	0.82	0.82	10.20	2.92	0.73	0.05
Boiler 2 distillate fuel	0.82	0.82	10.20	2.92	0.73	0.05
Boiler 3 distillate fuel	0.82	0.85	10.20	2.92	0.73	0.05
Boiler 4 distillate fuel	0.33	0.33	4.10	1.17	0.29	0.02

Visible emissions from the shared stack for Boilers 1-4, Stack 1, shall not exceed 30% opacity on a six-minute block average basis.

Fuel Use Requirements

Maine State Prison shall be limited to 760,000 gallons of distillate fuel use in the boilers on a calendar year total basis.

Fuel Sulfur Content Requirements

The boilers are licensed to fire distillate fuel which, by definition, has a sulfur content of 0.5% or less by weight. Per 38 M.R.S. § 603-A(2)(A)(3), as of July 1, 2018, no person shall import, distribute, or offer for sale any distillate fuel with a sulfur content

greater than 0.0015% by weight (15 ppm). Therefore, beginning July 1, 2018, the distillate fuel purchased or otherwise obtained for use in the boilers shall not exceed 0.0015% by weight (15 ppm).

2. Periodic Monitoring

   Periodic monitoring for the boilers shall include recordkeeping to document fuel use both on a monthly and calendar year total basis. Documentation shall include the type of fuel used and sulfur content of the fuel.

3. New Source Performance Standards (NSPS): 40 C.F.R. Part 60, Subpart Dc

   Boilers 1-3 are subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989.

   Boiler 4, however, is not subject to 40 C.F.R. Part 60, Subpart DC due to its size. [40 C.F.R. § 60.40c]

   Maine State Prison shall comply with all requirements of 40 C.F.R. Part 60, Subpart Dc applicable to Boilers 1-3 including, but not limited to, the following:

   a. Maine State Prison was required to submit a notification to EPA and the Department of the date of construction, anticipated start-up, and actual start-up.

      Maine State Prison submitted this notification on 10/04/2001. [40 C.F.R. § 60.48c(a)]

   b. Maine State Prison was required to perform and submit to EPA and the Department an initial performance test.

      Maine State Prison submitted the initial performance test on 03/14/2002. [40 C.F.R. § 60.44c and 40 C.F.R. § 60. 45c]

   c. Maine State Prison shall record and maintain records of the amounts of each fuel combusted during each day or, if applicable, monthly records with fuel certifications. [40 C.F.R. § 60.48c(g)]

   d. Maine State Prison shall submit semi-annual reports to EPA and to the Department. These reports shall include the calendar dates covered in the reporting period and records of fuel supplier certifications. The semi-annual reports are due within 30 days of the end of each six-month period. [40 C.F.R. § 60.48c(j) and 06-096 C.M.R. ch. 115, BPT]

e. The following address for EPA shall be used for any reports or notifications required to be copied to them:

U.S. Environmental Protection Agency, Region I
5 Post Office Square, Suite 100 (OES04-2)
Boston, MA 02109-3912
Attn: Air Compliance Clerk

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

The boilers are all subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63, Subpart JJJJJJ. Boilers 1-3 are considered existing oil boilers rated higher than 10 MMBtu/hr and Boiler #4 is considered an existing oil boiler rated below 10 MMBtu/hr. [40 C.F.R. §§63.11193 and 63.11195]

A summary of the currently applicable federal 40 C.F.R. Part 63, Subpart JJJJJJ requirements is listed below. At this time, the Department has not taken delegation of this area source MACT (Maximum Achievable Control Technology) rule promulgated by EPA; however, Maine State Prison is still subject to the requirements. Notification forms and additional rule information can be found on the following website: http://www.epa.gov/ttn/atw/boiler/boilerpg.html.

a. Compliance Dates, Notifications, and Work Practice Requirements

(1) Initial Notification of Compliance

An Initial Notification was to be submitted to EPA. [40 C.F.R. § 63.11225(a)(2)]

Maine State Prison submitted their Initial Notification to EPA on 09/22/2014.

(2) Boiler Tune-Up Program

(i) A boiler tune-up program shall be implemented. [40 C.F.R. § 63.11223]

(ii) Each tune-up shall be conducted at a frequency specified by the rule and based on the size, age, and operations of the boiler. Because each of the boilers are existing oil boilers rated higher than 5 MMBtu/hr, they shall be conducted every two years. [40 C.F.R. § 63.11223(a) and Table 2]

(iii)The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:

1. As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted, not to exceed 36 months from the previous inspection. Delay of the burner inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for oil fired boilers less than or equal to 5 MMBtu/hour, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [40 C.F.R. § 63.11223(b)(1)]
2. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 C.F.R. § 63.11223(b)(2)]
3. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted, not to exceed 36 months from the previous inspection. Delay of the inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for oil fired boilers less than or equal to 5 MMBtu/hour, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [40 C.F.R. § 63.11223(b)(3)]
4. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]
5. Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 C.F.R. § 63.11223(b)(5)]
6. If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up.
   [40 C.F.R. § 63.11223(b)(7)]

(iv) Tune-Up Report: A tune-up report shall be maintained onsite and, if requested, submitted to EPA. The report shall contain the following information:

1. The concentration of CO in the effluent stream (ppmv) and oxygen (volume percent) measured at high fire or typical operating load both **before** and **after** the boiler tune-up;

2. A description of any corrective actions taken as part of the tune-up of the boiler; and

3. The types and amounts of fuels used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units

sharing a fuel meter may estimate the fuel use by each unit. [40 C.F.R. § 63.11223(b)(6)]

(v) After conducting the initial boiler tune-up, a Notification of Compliance Status was to be submitted to EPA. [40 C.F.R. § 63.11225(a)(4) and 40 C.F.R. § 63.11214(b)]

Maine State Prison submitted their Notification of Compliance Status to EPA on 07/25/2016.

(3) Compliance Report

A compliance report shall be prepared by March 1st biennially which covers the previous two calendar years. The report shall be maintained by the source and submitted to the Department and to the EPA upon request. The report must include the items contained in §§ 63.11225(b)(1) and (2), including the following: [40 C.F.R. § 63.11225(b)]

(i) Company name and address;

(ii) A statement of whether the source has complied with all the relevant requirements of this Subpart;

(iii) A statement certifying truth, accuracy, and completeness of the notification and signed by a responsible official and containing the official's name, title, phone number, email address, and signature;

(iv) The following certifications, as applicable:

1. "This facility complies with the requirements in 40 C.F.R. § 63.11223 to conduct tune-ups of each boiler in accordance with the frequency specified in this Subpart."
2. "No secondary materials that are solid waste were combusted in any affected unit."
3. "This facility complies with the requirement in §§ 63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available."

(4) Energy Assessment

Boilers 1-3 are subject to the energy assessment requirement as follows:

A one-time energy assessment was required to be performed by a qualified energy assessor on the applicable boilers, and in accordance with 40 C.R.R. Part 63, Subpart JJJJJ, Table 2(16). [40 C.F.R. § 63.11196(a)(3)]

Maine State Prison conducted their one-time energy assessment on 11/10/2014.

b. Recordkeeping

Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart JJJJJJ including the following [40 C.F.R. § 63.11225(c)]:

(1) Copies of notifications and reports with supporting compliance documentation;
(2) Identification of each boiler, the date of tune-up, procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned;
(3) Records of the occurrence and duration of each malfunction of each applicable boiler; and
(4) Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler.

Records shall be in a form suitable and readily available for expeditious review. EPA requires submission of Notification of Compliance Status reports for tune-ups and energy assessments through their electronic reporting system. [40 C.F.R. § 63.11225(a)(4)(vi)]

C. Generators 1 and 2

Maine State Prison operates two emergency generators, Generator 1 and Generator 2. The two units are generator sets with each gen set consisting of an engine and an electrical generator. They both have engines rated at 15.4 MMBtu/hr, offering outputs of 1500 kW each. Generators 1 and 2 fire distillate fuel and were manufactured in 2000. Both generators share a fuel tank with the boilers and therefore fire fuel with the same sulfur content.

1. BPT Analysis

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

PM	0.12 lb/MMBtu Based on 06-096 C.M.R. ch. 103
PM_{10}	0.12 lb/MMBtu Based on 06-096 C.M.R. ch. 103
SO_2	0.5 lb/MMBtu based on the firing of distillate fuel with a sulfur content of 0.5% by weight

NO_x	3.2 lb/MMBtu Based on AP-42 table 3.4-1, dated 10/96
CO	0.85 lb/MMBtu Based on AP-42 table 3.4-1, dated 10/96
VOC	0.09 lb/MMBtu Based on AP-42 table 3.4-1, dated 10/96
Visible Emissions	06-096 C.M.R. ch. 115, BPT

The BPT emission limits for the generators are the following:

Unit	Pollutant	lb/MMBtu
Generator 1	PM	0.12
Generator 1	PM	0.12

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator 1 distillate fuel	1.85	1.85	7.70	49.28	13.09	1.39
Generator 2 distillate fuel	1.85	1.85	7.70	49.28	13.09	1.39

Visible emissions from each of the generators shall not exceed 20% opacity on a six-minute block average basis.

Fuel Sulfur Content Requirements

The generators are licensed to fire distillate fuel which, by definition, has a sulfur content of 0.5% or less by weight. Per 38 M.R.S. § 603-A(2)(A)(3), as of July 1, 2018, no person shall import, distribute, or offer for sale any distillate fuel with a sulfur content greater than 0.0015% by weight (15 ppm). Therefore, beginning July 1, 2018, the distillate fuel purchased or otherwise obtained for use in the generators shall not exceed 0.0015% by weight (15 ppm).

Operation Requirements

Each of the emergency generators shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. There is no limit on emergency operation. Each emergency generator shall be equipped with a

non-resettable hour-meter to record operating time. To demonstrate compliance with the operating hours limit, Facility shall keep records of the total hours of operation and the hours of emergency operation for each unit.

Emergency generators are only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. Emergency generators are not to be used for prime power when reliable offsite power is available; nor to operate or to be contractually obligated to be available in a demand response program, during a period of deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity.

2. New Source Performance Standards (NSPS)

Due to the dates of manufacture of the compression ignition emergency engines listed above, the engines are not subject to the New Source Performance Standards (NSPS) *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE),* 40 C.F.R. Part 60, Subpart IIII since the units were manufactured prior to April 1, 2006. [40 C.F.R. § 60.4200]

3. 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 not applicable to the emergency engines listed above. The units are considered existing, emergency stationary reciprocating internal combustion engines at an area HAP source. However, they are considered exempt from the requirements of 40 C.F.R. Part 63, Subpart ZZZZ since they are categorized as residential, commercial, or institutional emergency engine and they do not operate or are not contractually obligated to be available in a demand response program, during a period of deviation from standard voltage or frequency, or for supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in 40 C.F.R. § 63.6640(f)(4)(ii).

Operation of any emergency engine in a demand response program, during a period of deviation from standard voltage or frequency, or for supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in 40 C.F.R. § 63.6640(f)(4)(ii), would cause the engine to be subject to 40 C.F.R. Part 63, Subpart ZZZZ and require compliance with all applicable requirements.

D. Annual Emissions

1. Total Annual Emissions

Maine State Prison shall be restricted to the following annual emissions on a calendar year total basis. The tons per year limits were calculated based on 760,000 gal/yr of distillate fuel use in the boilers and 100 hrs/yr of operation of each generator:

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

	PM	PM_{10}	SO_2	NO_x	CO	VOC
Boilers	2.1	2.1	26.6	7.6	1.9	0.1
Generators	0.2	0.2	0.8	4.9	1.3	0.2
Total TPY	**2.3**	**2.3**	**27.4**	**12.5**	**3.2**	**0.3**

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 C.F.R. Part 52, Subpart A, § 52.21, *Prevention of Significant Deterioration of Air Quality* rule. Greenhouse gases, as defined in 06-096 C.M.R. ch. 100, 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_2e).

The quantity of CO_2e emissions from this facility is less than 100,000 tons per year, based on the following:

- the facility's fuel use limits;
- worst case emission factors from the following sources: U.S. EPA's AP-42, the Intergovernmental Panel on Climate Change (IPCC), and *Mandatory Greenhouse Gas Reporting,* 40 C.F.R. Part 98; and
- global warming potentials contained in 40 C.F.R. Part 98.

No additional licensing actions to address GHG emissions are required at this time.

III. AMBIENT AIR QUALITY ANALYSIS

Maine State Prison previously submitted an ambient air quality impact analysis for air emission license A-808-71-A-N (dated 01/02/2001) demonstrating that emissions from the facility, in conjunction with all other sources, do not violate Ambient Air Quality Standards (AAQS). An additional air quality impact analysis is not required for this renewal.

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-808-71-F-N 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 commencing 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]

(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 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 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 Part 70 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]

SPECIFIC CONDITIONS

(16) **Boilers 1-4**

A. Fuel

1. Total fuel use for the boilers shall not exceed 760,000 gal/yr of distillate fuel on a calendar year total basis. [06-096 C.M.R. ch. 115, BPT]
2. Prior to July 1, 2018, the facility shall fire distillate fuel with a maximum sulfur content not to exceed 0.5% by weight. [06-096 C.M.R. ch. 115, BPT]
3. Beginning July 1, 2018, the facility shall not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm). [06-096 C.M.R. ch. 115, BPT]
4. Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and the percent sulfur of the fuel delivered (if applicable). Records of annual fuel use shall be kept on a monthly and calendar year total basis. [06-096 C.M.R. ch. 115, BPT]

B. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler 1	PM	0.04	06-096 C.M.R. ch. 115, BPT
Boiler 2	PM	0.04	
Boiler 3	PM	0.04	
Boiler 4	PM	0.04	

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

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler 1	0.82	0.82	10.20	2.92	0.73	0.05
Boiler 2	0.82	0.82	10.20	2.92	0.73	0.05
Boiler 3	0.82	0.85	10.20	2.92	0.73	0.05
Boiler 4	0.33	0.33	4.10	1.17	0.29	0.02

D. Visible emissions from the shared stack for Boilers 1-4, Stack 1, shall not exceed 30% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

E. 40 C.F.R. Part 60, Subpart Dc

Maine State Prison shall comply with all requirements of 40 C.F.R. Part 60, Subpart Dc applicable to Boilers 1-3 including, but not limited to, the following:

a. Maine State Prison shall record and maintain records of the amounts of each fuel combusted during each day or, if applicable, monthly records with fuel certifications. [40 C.F.R. § 60.48c(g)]

b. Maine State Prison shall submit semi-annual reports to EPA and to the Department. These reports shall include the calendar dates covered in the reporting period and records of fuel supplier certifications. The semi-annual reports are due within 30 days of the end of each six-month period. [40 C.F.R. § 60.48c(j) and 06-096 C.M.R. ch. 115, BPT]

c. The following address for EPA shall be used for any reports or notifications required to be copied to them:

U.S. Environmental Protection Agency, Region I
5 Post Office Square, Suite 100 (OES04-2)
Boston, MA 02109-3912
Attn: Air Compliance Clerk

F. Boiler MACT (40 C.F.R. Part 63, Subpart JJJJJJ) Requirements for Boilers 1-4 [incorporated under 06-096 C.M.R. ch. 115, BPT]

1. The facility shall implement a boiler tune-up program. [40 C.F.R. § 63.11223]

a. Each tune-up shall be conducted at a frequency specified by the rule and based on the size, age, and operations of the boiler. Because all of the boilers are existing oil fired boilers rated higher than 5 MMBtu/hr, they shall be tuned up every two years. [40 C.F.R. § 63.11223(a) and Table 2]

b. The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:
(1) As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted, not to exceed 36 months from the previous inspection. Delay of the burner inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for oil fired boilers less than or equal to 5 MMBtu/hour, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [40 C.F.R. § 63.11223(b)(1)]
(2) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 C.F..R § 63.11223(b)(2)]
(3) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the

inspection until the next scheduled shutdown is permitted, not to exceed 36 months from the previous inspection. Delay of the inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for oil fired boilers less than or equal to 5 MMBtu/hour, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [40 C.F.R. § 63.11223(b)(3)]

(4) Optimize total emissions of CO, consistent with manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]

(5) Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 C.F.R. § 63.11223(b)(5)]

(6) If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up. [40 C.F.R. § 63.11223(b)(7)]

c. Tune-Up Report: A tune-up report shall be maintained onsite and, if requested, submitted to EPA. The report shall contain the following information:

(1) The concentration of CO in the effluent stream (ppmv) and oxygen (volume percent) measured at high fire or typical operating load both **before** and **after** the boiler tune-up;

(2) A description of any corrective actions taken as part of the tune-up of the boiler; and

(3) The types and amounts of fuels used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. [40 C.F.R. § 63.11223(b)(6)]

2. Compliance Report

A compliance report shall be prepared by March 1st biennially which covers the previous two calendar years. The report shall be maintained by the source and submitted to the Department and to the EPA upon request. The report must include the items contained in §§ 63.11225(b)(1) and (2), including the following: [40 C.F.R. § 63.11225(b)]

a. Company name and address;

b. A statement of whether the source has complied with all the relevant requirements of this Subpart;

c. A statement certifying truth, accuracy, and completeness of the notification and signed by a responsible official and containing the official's name, title, phone number, email address, and signature;
d. The following certifications, as applicable:
(1) "This facility complies with the requirements in 40 C.F.R. § 63.11223 to conduct tune-ups of each boiler in accordance with the frequency specified in this Subpart."
(2) "No secondary materials that are solid waste were combusted in any affected unit."
(3) "This facility complies with the requirement in §§ 63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available."

3. Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart JJJJJJ including the following [40 C.F.R. § 63.11225(c)]:
a. Copies of notifications and reports with supporting compliance documentation;
b. Identification of each boiler, the date of tune-up, procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned;
c. Records of the occurrence and duration of each malfunction of each applicable boiler; and
d. Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler.

Records shall be in a form suitable and readily available for expeditious review. EPA requires submission of Notification of Compliance Status reports for tune-ups and energy assessments through their electronic reporting system. [40 C.F.R. § 63.11225(a)(4)(vi)]

(17) **Generators 1 and 2**

A. Each of the emergency generators shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 C.M.R. ch. 115, BPT]

B. Maine State Prison shall keep records that include maintenance conducted on the engines and the hours of operation of each engine recorded through the non-resettable hour meter. Documentation shall include the number of hours each unit operated for emergency purposes, the number of hours each unit operated for non-emergency purposes, and the reason the engine was in operation during each time. [06-096 C.M.R. ch. 115, BPT]

C. Fuel Use

1. Prior to July 1, 2018, the facility shall fire distillate fuel with a maximum sulfur content not to exceed 0.5% by weight. [06-096 C.M.R. ch. 115, BPT]
2. Beginning July 1, 2018, the facility shall not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm). [06-096 C.M.R. ch. 115, BPT]
3. Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and the percent sulfur of the fuel delivered (if applicable). Records of annual fuel use shall be kept on a monthly and 12-month rolling total basis. [06-096 C.M.R. ch. 115, BPT]

D. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Generator 1	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)
Generator 2	PM	0.12	

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

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator 1	1.85	1.85	7.70	49.28	13.09	1.39
Generator 2	1.85	1.85	7.70	49.28	13.09	1.39

F. Visible emissions from each of the generators shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

G. Emergency generators are only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. Emergency generators and/or fire pumps are not to be used for prime power when reliable offsite power is available; nor to operate or to be contractually obligated to be available in a demand response program, during a period of deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity.

(18) Maine State Prison 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).

DONE AND DATED IN AUGUSTA, MAINE THIS 31 DAY OF March , 2017.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Cone for
PAUL MERCER, 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: 10/13/2016
Date of application acceptance: 10/26/2016

Date filed with the Board of Environmental Protection:

Filed
APR 0 3 2017
State of Maine
Board of Environmental Protection

This Order prepared by Colby Fortier-Brown, Bureau of Air Quality.