



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



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**Maine Department of Corrections  
Charleston Correctional Facility  
Penobscot County  
Charleston, Maine  
A-267-71-J-R (SM)**

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

**FINDINGS OF FACT**

After review of the air emissions license renewal application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes Annotated (M.R.S.A.), §344 and §590, the Maine Department of Environmental Protection (Department) finds the following facts:

**I. REGISTRATION**

**A. Introduction**

Maine Department of Corrections - Charleston Correctional Facility/Mountain View Youth Development Center (MEDOC) has applied to renew their Air Emission License permitting the operation of emission sources associated with their correctional facility.

The equipment addressed in this license is located at 1202 Dover Rd, Charleston, Maine.

**B. Emission Equipment**

The following equipment is addressed in this air emission license:

**Boilers**

<b>Equipment</b>	<b>Maximum Capacity (MMBtu/hr)</b>	<b>Maximum Firing Rate</b>	<b>Fuel Type</b>	<b>Date of Manuf.</b>	<b>Stack #</b>
Boiler #1	4.4	0.4 ton/hr	wood, 40% moisture	1951	1
Boiler #2	4.4	0.4 ton/hr	wood, 40% moisture	1951	1
Boiler #3	4.4	31.4 gal/hr	distillate fuel, 0.5% S	1951	1
Boiler #4	4.4	31.4 gal/hr	distillate fuel, 0.5% S	1960	1
Boiler #5	6.7	47.5 gal/hr	distillate fuel, 0.5% S	2000	2
Boiler #6	6.7	47.5 gal/hr	distillate fuel, 0.5% S	2000	2

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**Generators**

<b><u>Equipment</u></b>	<b><u>Power Output (Hp)</u></b>	<b><u>Heat Input (MMBtu/hr)</u></b>	<b><u>Firing Rate (gal/hr)</u></b>	<b><u>Fuel Type, % sulfur</u></b>	<b><u>Date of Manuf.</u></b>
Generator #7	700	6.8	49.7	distillate fuel, 0.5% sulfur	2001
Generator #8	700	6.8	49.7	distillate fuel, 0.5% sulfur	2001
Generator #9	200	2.3	16.6	distillate fuel, 0.5% sulfur	1997

MEDOC operates two solvent degreasers. MEDOC also operates an emergency diesel generator rated at 30 kW which is considered an insignificant activity.

**C. Application Classification**

The application for MEDOC 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 (CMR) 115 (as amended). With the annual fuel limits on the boilers and the operating hours restriction on the emergency generators, the facility is licensed below the major source thresholds for criteria pollutants and is considered a synthetic minor. The facility is also licensed below the major source thresholds for hazardous air pollutants (HAP) and is 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 CMR 100 (as amended). 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. Boilers #1 & #2

MEDOC operates Boilers #1 and #2 for facility heating and hot water needs. These boilers are rated at 4.4 MMBtu/hr each and fire wood. The boilers were each installed in 1951 and exhaust through Stack #1. Stack #1 is shared by Boilers #1 - #4.

1. 40 CFR Part 60, Subpart Dc

Due to both the size and year of manufacture, Boilers #1 and #2 are not subject to the New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hr manufactured after June 9, 1989.

2. BPT Findings

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

- PM/PM<sub>10</sub> – 0.74 lb/MMBtu based on 06-096 CMR 103
- SO<sub>2</sub> – 0.025 lb/MMBtu based on AP-42, Table 1.6-2, dated 9/03
- NO<sub>x</sub> – 0.22 lb/MMBtu based on AP-42, Table 1.6-2, dated 9/03
- CO – 0.60 lb/MMBtu based on AP-42, Table 1.6-2, dated 9/03
- VOC – 0.017 lb/MMBtu based on AP-42, Table 1.6-3, dated 9/03
- Opacity – 06-096 CMR 115, BPT

The BPT emission limits for the boilers are the following:

<u>Unit</u>	<u>Pollutant</u>	<u>lb/MMBtu</u>
Boiler #1	PM	0.74
Boiler #2	PM	0.74

<u>Unit</u>	<u>PM</u> <u>(lb/hr)</u>	<u>PM<sub>10</sub></u> <u>(lb/hr)</u>	<u>SO<sub>2</sub></u> <u>(lb/hr)</u>	<u>NO<sub>x</sub></u> <u>(lb/hr)</u>	<u>CO</u> <u>(lb/hr)</u>	<u>VOC</u> <u>(lb/hr)</u>
Boiler #1	3.26	3.26	0.11	0.97	2.64	0.07
Boiler #2	3.26	3.26	0.11	0.97	2.64	0.07

For periods when either Boiler #1 or Boiler #2 are in operation, visible emissions from Stack #1 shall not exceed 30% opacity on a 6 minute block average, except for no more than two (2) six (6) minute block averages in a 3 hour period.

MEDOC shall be limited to the equivalent of 2,500 tons/yr of wood at 40% moisture for Boilers #1 and #2 combined, based on a calendar year.

3. Periodic Monitoring

Periodic monitoring for Boilers #1 and #2 shall include recordkeeping to document fuel use both on a monthly and calendar year basis.

Records of wood fuel use shall be kept on a basis of 40% moisture. MEDOC shall use the following formula, when necessary, to convert fuel use records to 40% moisture:

$$\text{Tons of Wood at 40\%} = (\text{Tons of Wood at M\%}) \times [(100-M)/60]$$

where M = the moisture content of the actual wood fired

C. Boilers #3 - #6

MEDOC operates Boilers #3, #4, #5, and #6 for facility heating and hot water needs. Boilers #3 and #4 are rated at 4.4 MMBtu/hr each and were installed in 1951 and 1960 respectively. Boilers #5 and #6 are rated at 6.7 MMBtu/hr each and were installed in 2000. Boilers #3 - #6 fire distillate fuel. Boilers #3 and #4 exhaust through Stack #1 which is combined with Boilers #1 and #2. Boilers #5 and #6 exhaust through Stack #2.

1. 40 CFR Part 60, Subpart Dc

Due to their size, Boilers #3 - #6 are not subject to the New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hr manufactured after June 9, 1989.

2. BPT Findings

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

PM/PM <sub>10</sub>	–	0.08 lb/MMBtu based on 06-096 CMR 115, BPT
SO <sub>2</sub>	–	based on firing ASTM D396 compliant #2 fuel oil (0.5% sulfur by weight)
NO <sub>x</sub>	–	20 lb/1000 gal based on AP-42, Table 1.3-1, dated 5/10
CO	–	5 lb/1000 gal based on AP-42, Table 1.3-1, dated 5/10
VOC	–	0.34 lb/1000 gal based on AP-42, Table 1.3-3, dated 5/10
Opacity	–	06-096 CMR 115, BPT

The BPT emission limits for the boilers are the following:

Unit	Pollutant	lb/MMBtu
Boiler #3	PM	0.08
Boiler #4	PM	0.08
Boiler #5	PM	0.08
Boiler #6	PM	0.08

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #3	0.35	0.35	2.22	0.63	0.16	0.01
Boiler #4	0.35	0.35	2.22	0.63	0.16	0.01
Boiler #5	0.54	0.54	3.37	0.96	0.24	0.02
Boiler #6	0.54	0.54	3.37	0.96	0.24	0.02

For periods when either Boiler #1 or Boiler #2 are in operation, visible emissions from Stack #1 shall not exceed 30% opacity on a 6 minute block average, except for no more than two (2) six (6) minute block averages in a 3 hour period.

For periods when neither Boiler #1 or Boiler #2 are in operation (i.e. only distillate-fired boilers are exhausting to Stack #1), visible emissions from Stack #1 shall not exceed 20% opacity on a 6 minute block average, except for no more than one (1) six (6) minute block average in a 3 hour period.

Visible emissions from Stack #2 shall not exceed 20% opacity on a 6 minute block average, except for no more than one (1) six (6) minute block average in a 3 hour period.

MEDOC shall be limited to 560,000 gallons/yr of distillate fuel in the facility's boilers, based on a calendar year.

Prior to July 1, 2016, or by the date otherwise stated in 38 MRSA §603-A(2)(A)(3), the distillate fuel fired at the facility shall be ASTM D396 compliant #2 fuel oil (maximum sulfur content of 0.5% by weight). Per 38 MRSA §603-A(2)(A)(3), beginning July 1, 2016, or on the date specified in the statute, the facility shall fire distillate fuel with a maximum sulfur content limit of 0.005% by weight (50 ppm), and beginning January 1, 2018, or on the date specified in the statute, the facility shall fire distillate fuel with a maximum sulfur content limit of 0.0015% by weight (15 ppm). The specific dates contained in this paragraph reflect the current dates in the statute as of the effective date of this license; however, if the statute is revised, the facility shall comply with the revised dates upon promulgation of the statute revision.

3. Periodic Monitoring

Periodic monitoring for Boilers #3 - #6 shall include recordkeeping to document fuel use both on a monthly and calendar year basis. Documentation shall include the type of fuel used and sulfur content of the fuel.

D. 40 CFR Part 63, Subpart JJJJJ

Boilers #1 - #6 are subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* (40 CFR Part 63 Subpart JJJJJ). Boilers #1 and #2 are considered existing biomass boilers rated less than 10 MMBtu/hr. Boilers #3 - #6 are considered existing oil boilers rated less than 10 MMBtu/hr.

A summary of the currently applicable federal 40 CFR Part 63 Subpart JJJJJ 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 MEDOC 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>.

1. Compliance Dates, Notifications, and Work Practice Requirements

a. Initial Notification of Compliance

An Initial Notification submittal to EPA was due no later than January 20, 2014.  
[40 CFR Part 63.11225(a)(2)]

b. Boiler Tune-Up Program

i. A boiler tune-up program shall be implemented to include the initial tune-up of applicable boilers. [40 CFR Part 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. See chart below:

<b>Boiler Category</b>	<b>Tune-Up Frequency</b>
Existing Oil or Biomass fired boilers that are not designated as "Boilers with less frequent tune up requirements" listed below	Every 2 years
<b><i>Boilers with less frequent tune up requirements</i></b>	
Seasonal (see definition §63.11237)	Every 5 years
Limited use (see definition §63.11237)	Every 5 years
With a heat input capacity of <5MMBtu/hr	Every 5 years
Boiler with oxygen trim system which maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune up	Every 5 years

[40 CFR Part 63.11223(a) and Table 2]

- (b) The tune-up compliance report shall be maintained onsite and, if requested, submitted to EPA. The report shall contain the concentration of CO in the effluent stream (ppmv) and oxygen in volume percent, measured at high fire or typical operating load, before and after the boiler tune-up, a description of any corrective actions taken as part of the tune-up of the boiler, and the types and amounts of fuels used over the 12 months prior to the tune-up of the boiler. [40 CFR Part 63.11223(b)(6)] The compliance report shall also include the company name and address; a compliance statement signed by a responsible official certifying truth, accuracy, and completeness; and a description of any deviations and corrective actions. [40 CFR Part 63.11225(b)]
- ii. The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:
- (a) 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 for boilers greater than 5 MMBtu/hr or 72 months from the previous inspection for oil fired boilers less than 5 MMBtu/hr, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [40 CFR Part 63.11223(b)(1)]

- (b) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 CFR Part 63.11223(b)(2)]
- (c) 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 for boilers greater than 5 MMBtu/hr or 72 months from the previous inspection for oil fired boilers less than 5 MMBtu/hr, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [40 CFR Part 63.11223(b)(3)]
- (d) Optimize total emissions of CO, consistent with manufacturer's specifications. [40 CFR Part 63.11223(b)(4)]
- (e) 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 CFR Part 63.11223(b)(5)]
- (f) 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 CFR Part 63.11223(b)(7)]

iii. After conducting the initial boiler tune-up, a Notification of Compliance Status was to be submitted to EPA no later than July 19, 2014. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(b)]

## 2. Recordkeeping

Records shall be maintained consistent with the requirements of 40 CFR Part 63 Subpart JJJJJ including the following [40 CFR Part 63.11225(c)]: copies of notifications and reports with supporting compliance documentation; 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; documentation of fuel type(s) used monthly by each boiler; the occurrence and duration of each malfunction of the boiler; and actions taken during periods of malfunction to minimize emissions and actions taken to restore the malfunctioning boiler to its usual manner of operation. 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. [63.1125(a)(4)(vi)]

E. Emergency Generators #7, #8, and #9

MEDOC operates three emergency generators. The emergency generators are rated at 6.8 MMBtu/hr, 6.8 MMBtu/hr, and 2.3 MMBtu/hr and fire distillate fuel. The generators were manufactured in 2001, 2001, and 1997 respectively.

Generators #7 and #8 share a fuel tank with Boilers #5 and #6.

1. BPT Findings

The BPT emission limits for Generators #7 and #8 are based on the following:

- PM/PM<sub>10</sub> - 0.12 lb/MMBtu from 06-096 CMR 103 and 115, BPT
- SO<sub>2</sub> - based on firing ASTM D396 compliant #2 fuel oil (0.5% sulfur by weight)
- NO<sub>x</sub> - 3.2 lb/MMBtu from AP-42 dated 10/96
- CO - 0.85 lb/MMBtu from AP-42 dated 10/96
- VOC - 0.09 lb/MMBtu from AP-42 dated 10/96
- Opacity - 06-096 CMR 101

The BPT emission limits for Generator #9 are based on the following:

- PM/PM<sub>10</sub> - 0.12 lb/MMBtu from 06-096 CMR 103 and 115, BPT
- SO<sub>2</sub> - based on firing ASTM D396 compliant #2 fuel oil (0.5% sulfur by weight)
- NO<sub>x</sub> - 4.41 lb/MMBtu from AP-42 dated 10/96
- CO - 0.95 lb/MMBtu from AP-42 dated 10/96
- VOC - 0.35 lb/MMBtu from AP-42 dated 10/96
- Opacity - 06-096 CMR 101

The BPT emission limits for the generators are the following:

<u>Unit</u>	<u>Pollutant</u>	<u>lb/MMBtu</u>
Generator #7	PM	0.12
Generator #8	PM	0.12

<u>Unit</u>	<u>PM</u> <u>(lb/hr)</u>	<u>PM<sub>10</sub></u> <u>(lb/hr)</u>	<u>SO<sub>2</sub></u> <u>(lb/hr)</u>	<u>NO<sub>x</sub></u> <u>(lb/hr)</u>	<u>CO</u> <u>(lb/hr)</u>	<u>VOC</u> <u>(lb/hr)</u>
Generator #7	0.82	0.82	3.50	21.79	5.79	0.61
Generator #8	0.82	0.82	3.50	21.79	5.79	0.61
Generator #9	0.28	0.28	1.18	10.14	2.19	0.81

Visible emissions from each of the emergency generators shall not exceed 20% opacity on a 6-minute block average, except for no more than two (2) six (6) minute block averages in a 3-hour period.

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, MEDOC 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 for more than 15 hours per calendar year 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.

Prior to July 1, 2016, or by the date otherwise stated in 38 MRSA §603-A(2)(A)(3), the distillate fuel fired at the facility shall be ASTM D396 compliant #2 fuel oil (maximum sulfur content of 0.5% by weight). Per 38 MRSA §603-A(2)(A)(3), beginning July 1, 2016, or on the date specified in the statute, the facility shall fire distillate fuel with a maximum sulfur content limit of 0.005% by weight (50 ppm), and beginning January 1, 2018, or on the date specified in the statute, the facility shall fire distillate fuel with a maximum sulfur content limit of 0.0015% by weight (15 ppm). The specific dates contained in this paragraph reflect the current dates in the statute as of the effective date of this license; however, if the statute is revised, the facility shall comply with the revised dates upon promulgation of the statute revision.

2. 40 CFR Part 63, Subpart ZZZZ

The federal regulation 40 CFR Part 63, Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines* is not applicable to the emergency generators 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 Subpart ZZZZ since they are categorized as a residential, commercial, or institutional emergency engines and they do not operate or are not contractually obligated to be available for more than 15 hours per calendar year 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 as specified in §63.6640(f)(4)(ii).

Operation of emergency generators such that each exceeds 15 hours per calendar year 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 as specified in §63.6640(f)(4)(ii), would cause the generators to be subject to 40 CFR Part 63, Subpart ZZZZ, and require compliance with all applicable requirements.

F. Parts Washers

The parts washers are subject to *Solvent Cleaners*, 06-096 CMR 130 (as amended) and records shall be kept documenting compliance.

G. Annual Emissions

1. Total Annual Emissions

MEDOC shall be restricted to the following annual emissions, based on a calendar year. The tons per year limits were calculated based on the following:

- Firing 2,500 ton/year of wood at 40% moisture in Boilers #1 and #2.
- Firing 560,000 gal/year of distillate fuel in the oil-fired boilers.
- Operating the emergency generators for 100 hr/year each.

**Total Licensed Annual Emissions for the Facility**

**Tons/year**

(used to calculate the annual license fee)

	PM	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Boilers #1 & #2	10.0	10.0	0.3	3.0	8.1	0.2
Boilers #3 - #6	3.1	3.1	19.7	5.6	1.4	0.1
Generator #7	0.1	0.1	0.2	1.1	0.3	0.1
Generator #8	0.1	0.1	0.2	1.1	0.3	0.1
Generator #9	—	—	0.1	0.5	0.1	0.1
<b>Total TPY</b>	<b>13.3</b>	<b>13.3</b>	<b>20.5</b>	<b>11.3</b>	<b>10.2</b>	<b>0.6</b>

2. Greenhouse Gases

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

licensing purposes, greenhouse gases (GHG) are calculated and reported as carbon dioxide equivalents (CO<sub>2</sub>e).

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

### III. AMBIENT AIR QUALITY ANALYSIS

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

<u>Pollutant</u>	<u>Tons/Year</u>
PM <sub>10</sub>	25
SO <sub>2</sub>	50
NO <sub>x</sub>	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.

### 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-267-71-J-R subject to the following conditions.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

#### STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S.A. §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 CMR 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353-A. [06-096 CMR 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]

- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license.  
[06-096 CMR 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
    - 1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
    - 2. pursuant to any other requirement of this license to perform stack testing.
  - B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
  - C. submit a written report to the Department within thirty (30) days from date of test completion.  
[06-096 CMR 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
  - B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
  - C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such

alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

[06-096 CMR 115]

- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

### SPECIFIC CONDITIONS

(16) **Boilers #1 & #2**

- A. Boilers #1 and #2 shall fire only wood. Records of annual fuel use shall be kept on a 40% moisture basis. Records of fuel use shall be kept on a monthly and calendar year total basis. [06-096 CMR 115, BPT]
- B. Total fuel use for Boilers #1 and #2 combined shall not exceed the equivalent of 2,500 tons/yr of wood at 40% moisture, based on a calendar year. [06-096 CMR 115, BPT]
- C. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #1	PM	0.74	06-096 CMR 103(2)(A)(3)(a)
Boiler #2	PM	0.74	06-096 CMR 103(2)(A)(3)(a)

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

<b>Emission Unit</b>	<b>PM (lb/hr)</b>	<b>PM<sub>10</sub> (lb/hr)</b>	<b>SO<sub>2</sub> (lb/hr)</b>	<b>NO<sub>x</sub> (lb/hr)</b>	<b>CO (lb/hr)</b>	<b>VOC (lb/hr)</b>
Boiler #1	3.26	3.26	0.11	0.97	2.64	0.07
Boiler #2	3.26	3.26	0.11	0.97	2.64	0.07

(17) **Boilers #3 - #6**

A. Fuel

1. Total fuel use for Boilers #3 - #6 combined shall not exceed 560,000 gal/yr of distillate fuel, based on a calendar year. [06-096 CMR 115, BPT]
2. Prior to July 1, 2016 or the date specified in 38 MRSA §603-A(2)(A)(3), the distillate fuel fired in Boilers #3 - #6 shall be ASTM D396 compliant #2 fuel oil (max. sulfur content of 0.5% by weight). [06-096 CMR 115, BPT]
3. Beginning July 1, 2016 or on the date specified in 38 MRSA §603-A(2)(A)(3), Boilers #3 - #6 shall fire distillate fuel with a maximum sulfur content limit of 0.005% by weight (50 ppm). [38 MRSA §603-A(2)(A)(3)]
4. Beginning January 1, 2018 or on the date specified in 38 MRSA §603-A(2)(A)(3), Boilers #3 - #6 shall fire distillate fuel with a maximum sulfur content limit of 0.0015% by weight (15 ppm). [38 MRSA §603-A(2)(A)(3)]
5. Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and the percent sulfur of the fuel delivered. Records of annual fuel use shall be kept on a monthly and calendar year total basis. [06-096 CMR 115, BPT]

B. Emissions shall not exceed the following:

<b>Emission Unit</b>	<b>Pollutant</b>	<b>lb/MMBtu</b>	<b>Origin and Authority</b>
Boiler #3	PM	0.08	06-096 CMR 115, BPT
Boiler #4	PM	0.08	06-096 CMR 115, BPT
Boiler #5	PM	0.08	06-096 CMR 115, BPT
Boiler #6	PM	0.08	06-096 CMR 115, BPT

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

Emission Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #3	0.35	0.35	2.22	0.63	0.16	0.01
Boiler #4	0.35	0.35	2.22	0.63	0.16	0.01
Boiler #5	0.54	0.54	3.37	0.96	0.24	0.02
Boiler #6	0.54	0.54	3.37	0.96	0.24	0.02

(18) **Boiler Visible Emissions**

- A. For periods when either Boiler #1 or Boiler #2 are in operation, visible emissions from Stack #1 shall not exceed 30% opacity on a 6 minute block average, except for no more than two (2) six (6) minute block averages in a 3 hour period. [06-096 CMR 115, BPT]
- B. For periods when neither Boiler #1 or Boiler #2 are in operation (i.e. only distillate-fired boilers are exhausting to Stack #1), visible emissions from Stack #1 shall not exceed 20% opacity on a 6 minute block average, except for no more than one (1) six (6) minute block average in a 3 hour period. [06-096 CMR 115, BPT]
- C. Visible emissions from Stack #2 shall not exceed 20% opacity on a 6 minute block average, except for no more than one (1) six (6) minute block average in a 3 hour period. [06-096 CMR 115, BPT]

(19) **Boiler MACT (40 CFR Part 63, Subpart JJJJJ) Requirements**  
[incorporated under 06-096 CMR 115, BPT]

- A. An Initial Notification submittal to EPA was due no later than January 20, 2014. [40 CFR Part 63.11225(a)(2)]
- B. The facility shall implement a boiler tune-up program to include the initial tune-up of applicable boilers. [40 CFR Part 63.11223]

- Each tune-up shall be conducted at a frequency specified by the rule and based on the size, age, and operations of the boiler. See chart below:

<b>Boiler Category</b>	<b>Tune-Up Frequency</b>
Existing Oil or Biomass fired boilers that are not designated as "Boilers with less frequent tune up requirements" listed below	Every 2 years
<b><i>Boilers with less frequent tune up requirements</i></b>	
Seasonal (see definition §63.11237)	Every 5 years
Limited use (see definition §63.11237)	Every 5 years
With a heat input capacity of <5MMBtu/hr	Every 5 years
Boiler with oxygen trim system which maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune up	Every 5 years

[40 CFR Part 63.11223(a) and Table 2]

- The tune-up compliance report shall be maintained onsite and, if requested, submitted to EPA. The report shall contain the concentration of CO in the effluent stream (ppmv) and oxygen in volume percent, measured at high fire or typical operating load, before and after the boiler tune-up, a description of any corrective actions taken as part of the tune-up of the boiler, and the types and amounts of fuels used over the 12 months prior to the tune-up of the boiler. [40 CFR Part 63.11223(b)(6)] The compliance report shall also include the company name and address; a compliance statement signed by a responsible official certifying truth, accuracy, and completeness; and a description of any deviations and corrective actions. [40 CFR Part 63.11225(b)]
- C. The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:
- 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 for boilers greater than 5 MMBtu/hr or 72 months from the previous inspection for oil fired boilers less than 5 MMBtu/hr, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [40 CFR Part 63.11223(b)(1)]
  - Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 CFR Part 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 for boilers greater than 5 MMBtu/hr or 72 months from the previous inspection for oil fired boilers less than 5 MMBtu/hr, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [40 CFR Part 63.11223(b)(3)]
  4. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 CFR Part 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 CFR Part 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 CFR Part 63.11223(b)(7)]
- D. After conducting the initial boiler tune-up, a Notification of Compliance Status was to be submitted to EPA no later than July 19, 2014. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(b)]
- E. Records shall be maintained consistent with the requirements of 40 CFR Part 63 Subpart JJJJJ including the following [40 CFR Part 63.11225(c)]: copies of notifications and reports with supporting compliance documentation; 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; documentation of fuel type(s) used monthly by each boiler; the occurrence and duration of each malfunction of the boiler; and actions taken during periods of malfunction to minimize emissions and actions taken to restore the malfunctioning boiler to its usual manner of operation. Records shall be in a form suitable and readily available for expeditious review.
- (20) **Emergency Generators #7, #8, and #9**
- 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 CMR 115]
  - B. MEDOC 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 hours spent for emergency operation, including what classified the operation as emergency and how many hours spent for non-emergency. [06-096 CMR 115, BACT]

- C. If the generators are operated during a period of demand response or deviation from standard voltage or frequency, or to supply power during a non-emergency situation as part of a financial arrangement with another entity, MEDOC shall keep records of the notification of the emergency situation, and the date, start time, and end time of generator operation for these purposes. [06-096 CMR 115, BACT]
- D. Fuel
1. Prior to July 1, 2016 or the date specified in 38 MRSA §603-A(2)(A)(3), the distillate fuel fired in the emergency generators shall be ASTM D396 compliant #2 fuel oil (max. sulfur content of 0.5% by weight). [06-096 CMR 115, BPT]
  2. Beginning July 1, 2016 or on the date specified in 38 MRSA §603-A(2)(A)(3), Generators #7, #8, and #9 shall fire distillate fuel with a maximum sulfur content limit of 0.005% by weight (50 ppm). [38 MRSA §603-A(2)(A)(3)]
  3. Beginning January 1, 2018 or on the date specified in 38 MRSA §603-A(2)(A)(3), Generators #7, #8, and #9 shall fire distillate fuel with a maximum sulfur content limit of 0.0015% by weight (15 ppm). [38 MRSA §603-A(2)(A)(3)]
  4. Compliance shall be demonstrated by fuel records from the supplier showing the type and the percent sulfur of the fuel delivered. [06-096 CMR 115, BPT]

E. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Generator #7	PM	0.12	06-096 CMR 103(2)(B)(1)(a)
Generator #8	PM	0.12	06-096 CMR 103(2)(B)(1)(a)

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

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #7	0.82	0.82	3.50	21.79	5.79	0.61
Generator #8	0.82	0.82	3.50	21.79	5.79	0.61
Generator #9	0.28	0.28	1.18	10.14	2.19	0.81

- G. Visible emissions from each of the distillate fuel-fired generators shall not exceed 20% opacity on a 6 minute block average, except for no more than two (2) six (6) minute block averages in a 3 hour period. [06-096 CMR 101]
- H. 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 for more than 15 hours per calendar year 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. [06-096 CMR 115, BPT]

(21) **Parts Washer**

Parts washers at MEDOC are subject to *Solvent Cleaners*, 06-096 CMR 130 (as amended).

- A. MEDOC shall keep records of the amount of solvent added to each parts washer. [06-096 CMR 115, BPT]
- B. The following are exempt from the requirements of 06-096 CMR 130 [06-096 CMR 130]:
  1. Solvent cleaners using less than two liters (68 oz) of cleaning solvent with a vapor pressure of 1.00 mmHg, or less, at 20° C (68° F);
  2. Wipe cleaning; and,
  3. Cold cleaning machines using solvents containing less than or equal to 5% VOC by weight.
- C. The following standards apply to cold cleaning machines that are applicable sources under Chapter 130.
  1. MEDOC shall attach a permanent conspicuous label to each unit summarizing the following operational standards [06-096 CMR 130]:
    - (i) Waste solvent shall be collected and stored in closed containers.
    - (ii) Cleaned parts shall be drained of solvent directly back to the cold cleaning machine by tipping or rotating the part for at least 15 seconds or until dripping ceases, whichever is longer.
    - (iii) Flushing of parts shall be performed with a solid solvent spray that is a solid fluid stream (not a fine, atomized or shower type spray) at a pressure that does not exceed 10 psig. Flushing shall be performed only within the freeboard area of the cold cleaning machine.
    - (iv) The cold cleaning machine shall not be exposed to drafts greater than 40 meters per minute when the cover is open.
    - (v) Sponges, fabric, wood, leather, paper products and other absorbent materials shall not be cleaned in the degreaser.
    - (vi) When a pump-agitated solvent bath is used, the agitator shall be operated to produce no observable splashing of the solvent against the tank walls or the parts being cleaned. Air agitated solvent baths may not be used.
    - (vii) Spills during solvent transfer shall be cleaned immediately. Sorbent material used to clean spills shall then be immediately stored in covered containers.
    - (viii) Work area fans shall not blow across the opening of the degreaser unit.
    - (ix) The solvent level shall not exceed the fill line.
  2. The remote reservoir cold cleaning machine shall be equipped with a perforated drain with a diameter of not more than six inches. [06-096 CMR 130]

Maine Department of Corrections  
Charleston Correctional Facility  
Penobscot County  
Charleston, Maine  
A-267-71-J-R (SM)

22

Departmental  
Findings of Fact and Order  
Air Emission License  
Renewal

- (22) MEDOC shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S.A. §605).

DONE AND DATED IN AUGUSTA, MAINE THIS 29 DAY OF October, 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:

  
PATRICIA W. AHO, COMMISSIONER

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

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

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 9/19/14

Date of application acceptance: 9/24/14

Date filed with the Board of Environmental Protection:

This Order prepared by Lynn Muzzey, Bureau of Air Quality.

