STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

PAUL MERCER
COMMISSIONER

Maine Department of Corrections
Maine Correctional Center
Cumberland County
Windham, Maine
A-129-71-L-R/A (S/M)

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

FINDINGS OF FACT

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

I. REGISTRATION

A. Introduction

The Maine Department of Corrections, operating as Maine Correctional Center (MCC) of Windham, Maine has applied to renew their Air Emission License permitting the operation of emission sources associated with their correctional facility.

MCC has begun construction on a new Women's Re-entry Facility on their site. Part of this project includes the installation of a new emergency generator. The emergency generator (Generator #3) will be a distillate fuel fired unit with a rated standby power of 300 kW. In addition, MCC has requested an overall heat input limit on the boilers instead of usage limits on individual fuels. This will result in an increase in the amount of distillate fuel that can be fired in the boilers.

The equipment addressed in this license is located at 17 Mallison Falls Road in Windham, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Boilers

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate (gal/hr)	Fuel Type, % sulfur	Date of Manuf.	Date of Installation	Stack #
Boiler #1	16.7	119.6 gal/hr	Distillate Fuel	1989*	1989	1
		16,410 scf/hr	Natural Gas			
Boiler #2	16.7	119.6 gal/hr	Distillate Fuel	1961*	1969	1
		16,410 scf/hr	Natural Gas			

*burners were replaced in 2014 and boiler nameplate replaced but the boiler capacity remained the same

Generators

Equipment	Rated Power Output KW	Firing Rate (gal/hr)	Fuel Type, % sulfur	Date of Manuf.	Date of Install.
Generator #1	558	30	Distillate Fuel, 0.0015% S	1981	1981
Generator #2	558	30	Distillate Fuel, 0.0015% S	1981	1981
Generator #3	300	22.2	Distillate Fuel, 0.0015% S	2016	2016

Process Equipment

Equipment	Pollutant	Pollution Control Equipment
Wood Shop	PM	Fabric Filters
Paint Shop	VOC	Fabric Filters
Parts Washer	VOC	None

C. Definitions

Distillate Fuel means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials 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

The modification of a minor source is considered a major or minor modification based on whether or not expected emission increases exceed the "Significant Emission" levels as defined in the Department's *Definitions Regulation*, 06-096 CMR 100 (as amended). The emission increases are determined by subtracting the current licensed annual emissions preceding the modification from the maximum future licensed annual emissions, as follows:

Pollutant	Current License (TPY)	Future License (TPY)	Net Change (TPY)	Significant Emission Levels
PM	3.11	2.14	-0.97	100
PM_{10}	3.11	2.14	-0.97	100
SO_2	8.87	12.78	3.91	100
NO_x	14.06	6.13	-7.93	100
CO	4.69	2.63	-2.06	100
VOC	1.92	1.33	-0.59	50
CO_2e	<100,000	<100,000	<100,000	100,000

This modification is determined to be a minor modification and has been processed as such.

In addition, the license is considered to be a renewal of currently licensed emission units 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 heat input limits on Boilers #1 and #2, the VOC limits associated with the paint booths, 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. In addition, the facility is 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 new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in *Definitions*

Regulation, 06-096 CMR 100 (as amended). BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

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

MCC operates Boilers #1 & #2 for heat. The boilers are each rated at 16.7 MMBtu/hr and fire primarily natural gas with distillate fuel as a back-up fuel. Boiler #1 was installed in 1989 and Boiler #2 was installed in 1969. Both boilers exhaust through Stack #1. In 2014, the burners were replaced in both boilers, but the change did not change the maximum design capacity of either boiler. BPT for these boilers is considered the use of natural gas as the primary fuel fired in the boilers along with good combustion and maintenance practices.

1. BPT Findings

The BPT emission limits for Boiler #1 and Boiler #2 when firing natural gas were based on the following:

Natural Gas

PM/PM_{10}	–	0.05 lb/MMBtu based on 06-096 CMR 115, BPT
SO_2	–	0.6 lb/MMscf based on AP-42, Table 1.4-2, dated 7/98
NO_x	–	100 lb/MMscf based on AP-42, Table 1.4-1, dated 7/98
CO	–	84 lb/MMscf based on AP-42, Table 1.4-1, dated 7/98
VOC	–	5.5 lb/MMscf based on AP-42, Table 1.4-2, dated 7/98
Opacity	–	06-096 CMR 101

The emission limits for Boiler #1 and Boiler #2 when firing natural gas are the following:

Unit	Pollutant	lb/MMBtu
Boiler #1	PM	0.05
Boiler #2	PM	0.05

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1 (16.7 MMBtu/hr), nat. gas	0.84	0.84	0.01	1.64	1.38	0.09
Boiler #2 (16.7 MMBtu/hr), nat. gas	0.84	0.84	0.01	1.64	1.38	0.09

Distillate Fuel

The BPT emission limits for Boiler #1 and Boiler #2 when firing distillate fuel were based on the following:

PM/PM_{10}	–	0.08 lb/MMBtu based on 06-096 CMR 115, BPT
SO_2	–	based on firing distillate fuel with a maximum sulfur content of 0.5% by weight
NO_x	–	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 101 or previous BACT

The BPT emission limits for Boiler #1 and Boiler #2 when firing distillate fuel are the following:

Unit	Pollutant	lb/MMBtu
Boiler #1	PM	0.08
Boiler #2	PM	0.08

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1 (16.7 MMBtu/hr) distillate fuel	1.34	1.34	8.37	2.39	0.60	0.04
Boiler #2 (16.7 MMBtu/hr) distillate fuel	1.34	1.34	8.37	2.39	0.60	0.04

Visible emissions from Stack #1 (shared by Boiler #1 and Boiler #2) shall be limited to 20% opacity on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a continuous 3-hour period when natural gas or distillate fuel is being fired in either or both Boiler #1 and #2. [06-096 CMR 101]

MCC's boilers shall be limited to a combined heat input limit of 51,000 MMBtu/yr when firing natural gas alone or in combination with distillate fuel on a calendar year basis.

The following shall be used to determine the total monthly heat input into Boilers #1 and #2:

$$\left(\frac{\text{gal dist.fuel}}{\text{month}}\right)\left(\frac{0.14\text{MMBtu}}{\text{gal distillate fuel}}\right)+\left(\frac{\text{scf nat.gas}}{\text{month}}\right)\left(\frac{0.00102\text{MMBtu}}{\text{scf natural gas}}\right)=\frac{\text{MMBtu heat input to boiler}}{\text{month}}$$

Fuel Sulfur Content Requirements

Boiler #1 and Boiler #2 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.A. §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 Boiler #1 and Boiler #2 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 basis. Documentation shall include the type of fuel used and sulfur content of the fuel, as applicable.

3. 40 CFR Part 60, Subpart Dc

Boilers #1 and #2 are each rated at 16.7 MMBtu/hr and are licensed to fire natural gas and distillate fuel. Boiler #1 was installed in March 1989 and Boiler #2 was installed in 1969. Therefore the boilers are not subject to New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for boilers greater than 10 MMBtu/hr installed after June 9, 1989.

4. 40 CFR Part 63, Subpart JJJJJJ

Subpart JJJJJJ is not applicable to units firing gas, hot water heaters, temporary boilers, residential boilers, electric utility steam generating units covered by subpart UUUUU, etc.

Boilers #1 and #2 are not subject to the National Emission Standards for Hazardous Air *Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* (40 CFR Part 63 Subpart JJJJJJ) since the units are considered existing gas fired boilers, rated greater than 10 MMBtu/hr.

Gas-fired boilers are exempt from 40 CFR Part 63, Subpart JJJJJJ. However, boilers which fire fuel oil are not. A "gas-fired boiler" is defined as any boiler that burns

gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year. [40 CFR Part 63.11237]

If the boilers are operated in such a way that they no longer meet the definition of a gas fired boiler, MCC shall conduct a tune up and an energy assessment within 180 days of the effective date of the fuel switch. Notification of such changes must be submitted according to 40 CFR §63.11225(g). [40 CFR §63.11210(h)]

Boilers #1 and #2 are considered existing boilers because they were in operation prior to June 4, 2010. If Boiler #1 and/or Boiler #2 convert back to firing another fuel (such as distillate fuel) in the future, they would become subject as existing boilers at the time the conversion occurs.

C. Generator #1 and #2

MCC operates two existing emergency generators. The emergency generators are generator sets consisting of an engine and an electrical generator. The emergency generators have engines rated at 4.1 MMBtu/hr which fire distillate fuel and were installed in 1981.

1. BPT Findings

The BPT emission limits for Generators #1 and #2 were based on the following:

PM/PM_{10}	- 0.2 lb/MMBtu from 06-096 CMR 103
SO_2	- combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO_x	- 4.41 lb/MMBtu from AP-42 dated 10/96, Table 3.4-1
CO	- 0.95 lb/MMBtu from AP-42 dated 10/96, Table 3.4-1
VOC	- 0.35 lb/MMBtu from AP-42 dated 10/96, Table 3.4-1
Opacity	- 06-096 CMR 101

The BPT emission limits for the Generators #1 and #2 are the following:

Unit	Pollutant	lb/MMBtu
Generator #1	PM	0.20
Generator #2	PM	0.20

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1 (4.1 MMBtu/hr), Distillate	0.82	0.82	0.01	18.13	3.90	1.44
Generator #2 (4.1 MMBtu/hr), Distillate	0.82	0.82	0.01	18.13	3.90	1.44

Visible emissions from Generators #1 and #2 each of the distillate fuel-fired emergency generators shall not exceed 20% opacity on a 6-minute block average basis, 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, MCC 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.

2. New Source Performance Standards (NSPS)

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

3. National Emission Standards for Hazardous Air Pollutants (NESHAP):

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 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 Subpart ZZZZ since they are categorized as 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 for supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in 40 CFR §63.6640(f)(4)(ii).

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

D. Generator #3

Generator #3 will be installed as part of the new Women's Re-Entry Facility construction. The engine is rated at 3 MMBtu/hr and fires distillate fuel. The generator will be manufactured and installed in 2016. New or modified equipment is required to meet the requirements of BACT, which is defined as emission limitation based on the maximum degree of reduction for each pollutant emitted through the application of production processes or available methods, systems and techniques taking into account energy, environmental and economic impacts and other costs. The proposed generator is model number 300REOZJ manufactured by Kohler, and is certified to meet EPA Tier 3 Standards. The specification and Tier 3 certification were included in MCC's application package dated April 1, 2016.

To meet the requirements for BACT MCC proposes to fire ultra-low sulfur distillate fuel and to ensure good combustion and maintenance practices for proper operation of the generator. In addition, Generator #3 will be limited to 100 hours of non-emergency operation. Due to these operational requirements and the type of fuel burned, emissions will be minimal and additional control measures would not be economically feasible.

1. BACT

The BACT emission limits for Generator #3 are based on the following:

PM/PM_{10}	- 0.12 lb/MMBtu from 06-096 CMR 103
SO_2	- combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO_x	- 4.41 lb/MMBtu from AP-42 dated 10/96, Table 3.3-1
CO	- 0.95 lb/MMBtu from AP-42 dated 10/96, Table 3.3-1
VOC	- 0.35 lb/MMBtu from AP-42 dated 10/96, Table 3.3-1
Opacity	- 06-096 CMR 115, BACT

The BACT emission limits for Generator #3 are the following:

Unit	Pollutant	lb/MMBtu
Generator #3	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 #3 (3.0 MMBtu/hr) Distillate fuel	0.36	0.36	0.01	13.41	2.89	1.06

Visible emissions from Generator #3 shall not exceed 20% opacity on a 6-minute block average basis.

2. 40 CFR Part 60, Subpart IIII

The federal regulation 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE)* is applicable to the emergency engine listed above since the unit was ordered after July 11, 2005, and manufactured after April 1, 2006. By meeting the requirements of Subpart IIII, the unit also meets the requirements found in the *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 CFR Part 63, Subpart ZZZZ. [40 CFR §60.4200]

a. Emergency Engine Designation and Operating Criteria

Under Subpart IIII, a stationary reciprocating internal combustion engine (ICE) is considered an **emergency** stationary ICE (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 Subpart IIII, 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 or equipment failure;
- 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 ICE 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, non-emergency 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, unless:

a. The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

b. The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
c. The dispatch follows reliability, emergency operation or similar protocols that follow specific North American Electric Reliability Corporation (NERC), regional, state, public utility commission, or local standards or guidelines.
d. The power is provided only to the facility itself or to support the local transmission and distribution system.
e. The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission, or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

a. 40 CFR Part 60, Subpart IIII Requirements

(1) Manufacturer Certification Requirement
The engine shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in 40 CFR §60.4202. [40 CFR §60.4205(b)]

(2) Ultra-Low Sulfur Fuel Requirement
The fuel fired in the engine shall not exceed 15 ppm sulfur (0.0015% sulfur), except that any existing fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. [40 CFR §60.4207(b)]

(3) Non-Resettable Hour Meter Requirement
A non-resettable hour meter shall be installed and operated on each engine. [40 CFR §60.4209(a)]

(4) Operation and Maintenance Requirements
The engine shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by MCC that are approved by the engine manufacturer. MCC may only change those emission-related settings that are permitted by the manufacturer. [40 CFR §60.4211(a)]

(5) Annual Time Limit for Maintenance and Testing
As an emergency engine, the unit shall be limited to 100 hours/year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year

of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, non-emergency 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 unless the conditions in §60.4211(f)(3)(i) are met). [40 CFR §60.4211(f)]

(6) Initial Notification Requirement
No initial notification is required under Subpart IIII for emergency engines. [40 CFR §60.4214(b)]

(7) Recordkeeping
MCC 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, including what classified the operation as emergency, and the number of hours the unit operated for non-emergency purposes. If the engine is 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 as specified in §60.4211(f)(3)(i), MCC shall keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes. [40 CFR §60.4214(b)]

(8) Annual Reporting Requirements for Demand Response Availability Over 15 Hours Per Year (for engines greater than 100 brake hp)
If MCC operates or is 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 for supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in §60.4211(f)(3)(i), the facility shall submit an annual report containing the information in §60.4214(d)(1)(i) through (vii). The annual report for each calendar year must be submitted no later than March 31st of the following calendar year. The annual report must be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form is not available in CEDRI at the time that the report is due, the written report must be submitted to the following address:

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

[40 CFR §60.4214(d)]

E. Parts Washer

The parts washer is in the maintenance building and has a design capacity of 30 gallons. The parts washer is subject to *Solvent Cleaners*, 06-096 CMR 130 (as amended) and records shall be kept documenting compliance.

F. Woodworking

The ventilation from the woodworking activities has been modified to flow through Powermatic particulate controls and vents indoors, thus this operation no longer requires licensing.

G. Paint Booth

MCC operates a small paint booth to paint miscellaneous wood products from the carpentry shop. The booth is approximately 7 feet wide by 7 feet long by 8 feet tall. The booth is equipped with particulate filters that are replaced about once per month. The facility also uses water-based paints to minimize air emissions. To meet the requirements of BPT, MCC shall continue to use water based paints and particulate filters to control overspray.

The surface coating operations at MCC do not fall under any of the surface coating categories listed in *Surface Coating Facilities,* 06-096 CMR 129 (as amended), and are therefore not subject to the requirements of 06-096 CMR 129. BPT for the paint booth shall be a limit of 1.0 ton of VOC emissions on a calendar year basis and the use of particulate filters to control overspray. VOCs shall be calculated based on the quantities of coating used and the VOC content of each coating. The particulate filters shall be replaced once per month and a maintenance log shall be kept for the paint booth.

H. Fugitive Emissions

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity, except for no more than five minutes in any one-hour period. Compliance shall be determined by an aggregate of the individual 15-second opacity observations which exceed 20% opacity in any one hour.

I. General Process Emissions

Visible emissions from any general process source shall not exceed 20% opacity on a six-minute block average basis, except for no more than one six-minute block average in a one-hour period.

J. Annual Emissions

1. Boilers #1 and #2 shall be limited to a total heat input capacity of 51,000 MMBtu/yr based on firing natural gas and distillate fuel in any combination.
2. Emergency Generators #1, #2 and #3 shall each be limited to 100 hours of non-emergency operation on a calendar year basis.
3. The Paint Booth shall be limited to 1.0 ton of VOC on a calendar year basis.
4. MCC shall be restricted to the following annual emissions, based on a calendar year:

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 #1 and #2	2.04	2.04	12.75	3.64	2.10	0.14
Generator #1	0.04	0.04	0.01	0.91	0.19	0.07
Generator #2	0.04	0.04	0.01	0.91	0.19	0.07
Generator #3	0.02	0.02	0.01	0.67	0.14	0.05
Paint Booth	-	-	-	-	-	1.00
Total	**2.14**	**2.14**	**12.78**	**6.13**	**2.63**	**1.33**

* Worse case emissions for boilers – PM, PM_{10}, SO_2 and NO_x are from firing distillate fuel; CO and VOC are from firing Natural Gas

5. 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_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 40 CFR Part 98, *Mandatory Greenhouse Gas Reporting*; and
- global warming potentials contained in 40 CFR Part 98.

No additional licensing actions to address GHG emissions are required 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:

Pollutant	Tons/Year
PM_{10}	25
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.

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-129-71-L-R/A 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 and #2**

A. Fuel

1. Total heat input from the firing of any combination of natural gas and distillate fuel in Boilers #1 and #2 shall not exceed 51,000 MMBtu/year, based on a calendar year total basis. [06-096 CMR 115, BPT]
2. Boilers #1 and #2
3. 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 CMR 115, BPT]
4. 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 CMR 115, BPT]
5. 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 CMR 115, BPT]

B. Emissions when firing Natural Gas shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #1	PM	0.05	06-096 CMR 115, BPT
Boiler #2	PM	0.05	06-096 CMR 115, BPT

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

Emission Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	0.84	0.84	0.01	1.64	1.38	0.09
Boiler #2	0.84	0.84	0.01	1.64	1.38	0.09

D. Emissions when firing Distillate Fuel shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #1	PM	0.08	06-096 CMR 115, BPT
Boiler #2	PM	0.08	06-096 CMR 115, BPT

E. Emissions from firing Distillate Fuel shall not exceed the following [06-096 CMR 115, BPT]:

Emission Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	1.34	1.34	8.37	2.39	0.60	0.04
Boiler #2	1.34	1.34	8.37	2.39	0.60	0.04

F. Visible emissions from Stack #1 (shared by Boiler #1 and Boiler #2) shall be limited to 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a continuous 3-hour period when firing natural gas or distillate. [06-096 CMR 101]

G. Boiler MACT (40 CFR Part 63, Subpart JJJJJJ) Requirements for Boilers #1 and #2 [incorporated under 06-096 CMR 115, BPT]

Boilers #1 and #2 are not subject to Boiler MACT as long these boilers continue to meet the definition of a gas fired boiler. A "gas-fired boiler" is defined as any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year. [40 CFR Part §63.11237]

If Boilers #1 and/or #2 no longer meet the definition of a gas fired boilers, MCC must conduct a tune up and an energy assessment within 180 days of the effective date of the fuel switch. Notification of such changes must be submitted according to 40 CFR §63.11225(g). [40 CFR §63.11210(h)]

(17) **Emergency Generators #1 and #2**

A. Generators #1 and #2 shall each be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 CMR 115, BPT]

B. The fuel sulfur content for Generators #1 and #2 shall be limited to 0.0015% sulfur by weight. Compliance shall be demonstrated by fuel records from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [06-096 CMR 115, BPT]

C. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Generator #1	PM	0.2	06-096 CMR 115. BPT
Generator #2	PM	0.2	06-096 CMR 115, BPT

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

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1 (4.1 MMBtu/hr) Distillate fuel	0.82	0.82	0.01	18.13	3.90	1.44
Generator #2 (4.1 MMBtu/hr) Distillate fuel	0.82	0.82	0.01	18.13	3.90	1.44

E. Visible Emissions

Visible emissions from Generator #1 and Generator #2 shall not exceed 20% opacity on a 6-minute block average basis, except for no more than two (2) six (6) minute block averages in a 3-hour period. [06-096 CMR 101]

F. Operational Requirements

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.

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, MMC 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.

(18) **Generator #3**

A. Generator #3 shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 CMR 115, BACT]

B. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Generator #3	PM	0.12	06-096 CMR 115, BACT

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

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #3 (3.0 MMBtu/hr) distillate fuel	0.36	0.36	0.01	13.41	2.89	1.06

D. Visible Emissions

Visible emissions from Generator #3 shall not exceed 20% opacity on a six (6) minute block average basis. [06-096 CMR 115, BACT]

E. Generator #3 shall meet the applicable requirements of 40 CFR Part 60, Subpart IIII, including the following:

1. Manufacturer Certification
   The engine shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in §60.4202. [40 CFR §60.4205(b)]

2. Ultra-Low Sulfur Fuel
   The fuel fired in the engine shall not exceed 15 ppm sulfur (0.0015% sulfur), except that any existing fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. Compliance with the fuel sulfur content limit shall be based on fuel records from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [40 CFR §60.4207(b) and 06-096 CMR 115]

3. Non-Resettable Hour Meter
   A non-resettable hour meter shall be installed and operated on the engine. [40 CFR §60.4209(a)]

4. Annual Time Limit for Maintenance and Testing
   a. As an emergency engine, the unit shall be limited to 100 hours/year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, non-emergency 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 unless the conditions in §60.4211(f)(3)(i) are met). These limits are based on a calendar year. Compliance shall be demonstrated by records (electronic or written log) of all engine operating hours. [40 CFR §60.4211(f) and 06-096 CMR 115]

   b. MCC 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 hours spent for emergency operation, including what classified the operation as emergency and how many hours spent for non-emergency. If the engine is 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 as specified in §60.4211(f)(3)(i), the MCC shall keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

5. Operation and Maintenance
   The engine shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by MCC that are approved by the engine manufacturer. MCC may only change those emission-related settings that are permitted by the manufacturer. [40 CFR §60.4211(a)]

6. Annual Reporting For Demand Response Availability Over 15 Hours Per Year (for engines greater than 100 brake hp)
   If MCC operates or is 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 §60.4211(f)(3)(i), the facility shall submit an annual report containing the information in §60.4214(d)(1)(i) through (vii). The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year. The annual report must be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form is not available in CEDRI at the time that the report is due, the written report must be submitted to the following address:

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

   [40 CFR §60.4214(d)]

(19) **Parts Washer**

The Parts washer at MCC is subject to Solvent Cleaners, 06-096 CMR 130 (as amended).

A. MCC 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. MCC shall attach a permanent conspicuous label to each unit summarizing the following operational standards [06-096 CMR 130]:
   a. Waste solvent shall be collected and stored in closed containers.
   b. 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.
   c. 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.
   d. The cold cleaning machine shall not be exposed to drafts greater than 40 meters per minute when the cover is open.
   e. Sponges, fabric, wood, leather, paper products and other absorbent materials shall not be cleaned in the parts washer.
   f. 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.
   g. Spills during solvent transfer shall be cleaned immediately. Sorbent material used to clean spills shall then be immediately stored in covered containers.
   h. Work area fans shall not blow across the opening of the parts washer unit.
   i. 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]

(20) **Paint Booth**

A. VOC emissions from the Paint Booth shall be limited to 1.0 ton/year on a calendar year basis. VOC emissions shall be calculated based on the amount of coating used and the VOC content of each coating. [06-096 CMR 115, BPT]

B. The particulate filters shall be replaced once per month and a maintenance log shall be kept for the Paint Booth. [06-096 CMR 115, BPT]

(21) **Fugitive Emissions**

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity, except for no more than five minutes in any one-hour period. Compliance shall be determined by an aggregate of the individual 15-second opacity observations which exceed 20% in any one hour. [06-096 CMR 101]

(22) **General Process Sources**

Visible emissions from any general process source shall not exceed 20% opacity on a six-minute block average basis, except for no more than one six-minute block average in a one-hour period. [06-096 CMR 101]

(23) MCC 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 12 DAY OF July , 2016.

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 complete renewal application, as determined by the Department, is submitted prior to expiration of this license, then pursuant to Title 5 M.R.S.A. §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: April 7, 2016
Date of application acceptance: April 20, 2016

Date filed with the Board of Environmental Protection:

This Order prepared by Lisa P. Higgins, Bureau of Air Quality.