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

DEPARTMENT ORDER

Maine Department of Corrections **Maine Correctional Center** **Cumberland County** **Windham, Maine** **A-129-71-M-A**	**Departmental** **Findings of Fact and Order** **Air Emission License** **Amendment #1**

FINDINGS OF FACT

After review of the air emission license 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 (M.R.S.) § 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 was issued Air Emission License A-129-71-L-R/A on July 15, 2016, for the operation of emission sources associated with their correctional facility.

MCC has requested an amendment to their license for the installation of six new high efficiency natural gas boilers to support the hot water needs of the new facilities being constructed at MCC. In addition, two generators will be installed for stand-by emergency use only.

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

B. Emission Equipment

The following equipment is addressed in this air emission license amendment:

Boilers

Equipment	Max. Capacity (MMBtu/hr)	Max. Firing Rate (scf/hr)	Fuel Type	Date of Manuf.	Date of Install.	Stack #
Boiler #3	6.0	5825.24	Natural Gas	2019	2021	2
Boiler #4	6.0	5825.24	Natural Gas	2019	2021	2
Boiler #5	6.0	5825.24	Natural Gas	2019	2021	2
Boiler #6	6.0	5825.24	Natural Gas	2019	2021	3
Boiler #7	6.0	5825.24	Natural Gas	2019	2021	3
Boiler #8	6.0	5825.24	Natural Gas	2019	2021	3

Stationary Engines

Equipment	Max. Input Capacity	Rated Output Capacity	Fuel Type, % sulfur	Firing Rate (gal/hr)	Date of Manuf.	Date of Install.
Generator #4	7.32 MMBtu/hr	750 kW	Distillate fuel, 0.0015 %S	54.2	2018	2021
Generator #5	7.32 MMBtu/hr	750 kW	Distillate fuel, 0.0015 %S	54.2	2018	2021

C. Definitions

Distillate Fuel means the following:

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

D. Application Classification

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

The modification of a minor source is considered a major or minor modification based on whether expected emission increases exceed the "Significant Emission" levels as defined in *Definitions Regulation*, 06-096 Code of Maine Rules (C.M.R.) ch. 100. The emission increases are determined by subtracting the current licensed annual emissions preceding the modification from the future licensed annual emissions, as follows:

The equipment addressed by this license are new emission units. Baseline actual emissions for new equipment are considered to be zero for all pollutants; therefore, the selection of a baseline year is unnecessary.

Pollutant	Current License (TPY)	Future License (TPY)	Net Change (TPY)	Significant Emission Levels (TPY)
PM	2.14	10.1	7.96	100
PM_{10}	2.14	10.1	7.96	100
SO_2	12.78	12.9	0.12	100
NO_x	6.13	12.3	6.17	100
CO	2.63	16.1	13.47	100
VOC	1.33	2.2	0.87	50

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

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 C.M.R. ch. 100. Separate control requirement categories exist for new and existing equipment.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in *Definitions Regulation*, 06-096 C.M.R. ch. 100. BACT is a top-down approach to selecting air emission controls considering economic, environmental, and energy impacts.

B. Boiler #3-#8

MCC operates Boiler #3-#8 for hot water. The boilers are to be installed in early 2021 and are Viessmann Model 300 CA3B 6.0 Condensing Boilers. They are each rated at 6.0 MMBtu/hr and fire natural gas. Boilers #3-#5 will exhaust through one stack, and Boilers #6-#8 will exhaust through another stack.

1. BACT Findings

Following is a BACT analysis for control of emissions from Boilers #3-#8.

a. Particulate Matter (PM, PM_{10})
MCC has proposed to burn only natural gas, a low-ash content fuel, in the boilers and use good combustion practices. Additional add-on pollution controls are not economically feasible for boilers of this size.

BACT for PM/PM_{10} emissions from Boilers #3-#8 is the firing of natural gas, the use of good combustion practices, and the emission limits listed in the tables below.

b. Sulfur Dioxide (SO_2)
MCC has proposed to fire only natural gas, a fuel with a low sulfur content. The use of this fuel results in minimal emissions of SO_2, thus additional add-on pollution controls are not economically feasible.

BACT for SO_2 emissions from Boilers #3-#8 is the use of natural gas and the emission limits listed in the tables below.

c. Nitrogen Oxides (NO_x)

MCC considered several control strategies for the control of NO_x including Selective Catalytic Reduction (SCR), Selective Non-Catalytic Reduction (SNCR), water/steam injection, flue gas recirculation (FGR), and the use of low NO_x burners.

Both SCR and SNCR are technically feasible control technologies for minimizing NO_x. However, they have a negative environmental impact of emissions of unreacted ammonia. In addition, due to the initial capital cost and the annual operating costs, these systems are typically only considered cost effective for units larger than Boilers #3-#8.

Water/steam injection and FGR have similar NO_x reduction efficiencies. However, water/steam injection results in reduced boiler efficiency of approximately 5%. Due to their size, neither the FGR nor the water/steam injection strategies are feasible for MCC's boilers.

The use low NOx burners have been determined to be feasible and has been selected as part of the BACT NO_x control strategy. To maximize the effectiveness of the low NO_x burners, the boilers are to be adjusted upon installation to achieve 20 ppm of NO_x @3% O_2.

BACT for NO_x emissions from Boilers #3-#8 is the use of low NOx burners and the emission limits listed in the tables below.

d. Carbon Monoxide (CO) and Volatile Organic Compounds (VOC)

MCC considered several control strategies for the control of CO and VOC including oxidation catalysts, thermal oxidizers, and use of good combustion practices.

Oxidation catalysts and thermal oxidizers both have high capital, maintenance, and operational costs considering the size of the boilers in question. These controls were determined to not be economically feasible.

BACT for CO and VOC emissions from Boilers #3-#8 is the use of a good combustion practices and the emission limits listed in the tables below.

e. Emission Limits

The BACT emission limits for Boiler #3-#8 were based on the following:

Natural Gas

PM/PM_{10}	–	0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
SO_2	–	0.6 lb/MMscf based on AP-42 Table 1.4-2 dated 7/98
NO_x	–	0.024 lb/MMBtu (based on 20 ppm NO_x @3% O_2 based on manufacturer data)
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
Visible Emissions	–	06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Boilers #3-#8 are the following:

Unit	Pollutant	lb/MMBtu
Boiler #3	PM	0.05
Boiler #4	PM	0.05
Boiler #5	PM	0.05
Boiler #6	PM	0.05
Boiler #7	PM	0.05
Boiler #8	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 #3 Natural Gas	0.3	0.3	0.0035	0.14	0.49	0.03
Boiler #4 Natural Gas	0.3	0.3	0.0035	0.14	0.49	0.03
Boiler #5 Natural Gas	0.3	0.3	0.0035	0.14	0.49	0.03
Boiler #6 Natural Gas	0.3	0.3	0.0035	0.14	0.49	0.03
Boiler #7 Natural Gas	0.3	0.3	0.0035	0.14	0.49	0.03
Boiler #8 Natural Gas	0.3	0.3	0.0035	0.14	0.49	0.03

2. Visible Emissions

   Visible emissions from each boiler stack shall not exceed 10% opacity on a six-minute block average basis.

3. Periodic Monitoring

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

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

   Due to their size, Boilers #3–#8 are not subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989. [40 C.F.R. § 60.40c]

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

   Boilers #3-#8 are not subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63, Subpart JJJJJJ. Subpart JJJJJ is not applicable to boilers firing natural gas; therefore, Boilers #3-#8 are not subject to this subpart.
   [40 C.F.R. § 63.11195(e)]

C. Generators #4 and #5

MCC is to install two 750 kW Caterpillar C18 emergency generators. The emergency generators are generator sets with each gen set consisting of an engine and an electrical generator. The emergency generators have engines each rated at 7.32 MMBtu/hr and fire distillate fuel. Both emergency generators are equipped with EPA certified Tier II engines and were manufactured in 2018.

1. BACT Findings

   a. Particulate Matter (PM and PM_{10})
   PM emissions from distillate fuel-fired engines are generally controlled through proper operation and maintenance. Additionally, these engines will be subject to 40 C.F.R. Part 60, Subpart IIII, which means they will be required to meet EPA emission standards for emergency stationary engines as discussed below. Given the operating hours restrictions included in 40 C.F.R. Part 60, Subpart IIII, the use of add-on controls for PM is not economically feasible. BACT for PM and PM_{10}

emissions from Generators #4 and #5 shall be proper operation and maintenance of the units, installation of EPA certified emergency stationary engines as required in 40 C.F.R. § 60.4205(b), and the emission limits listed in the tables below.

b. Sulfur Dioxide (SO_2)

For emergency engines that fire distillate fuel and operate for only short periods of time, the use of wet scrubbers or other additional SO_2 add-on control methods would not be economically feasible considering the minimal emissions due to the limited use of the engines. The most practical method for limiting SO_2 emissions from such engines is the use of ultra-low sulfur fuel, such as distillate fuel with a sulfur content no greater than 0.0015% by weight. BACT for SO_2 emissions from Generators #4 and #5 shall be the use of distillate fuel with a sulfur content no greater than 0.0015% by weight, installation of EPA certified emergency stationary engines as required in 40 C.F.R. § 60.4205(b), and the emission limits listed in the tables below.

c. Nitrogen Oxides (NO_x)

Potentially available control options for reducing emissions of NO_x from distillate fuel-fired generators include combustion controls, selective catalytic reduction (SCR), and non-selective catalytic reduction (NSCR). Combustion controls are typically implemented through design features such as electronic engine controls, injection systems, combustion chamber geometry, and turbocharging systems.

SCR and NSCR are both post-combustion NO_x reduction technologies. SCR uses ammonia to react with NO_x in the gas stream in the presence of a catalyst to form nitrogen and water. NSCR uses a catalyst to convert CO, NO_x, and hydrocarbons into carbon dioxide, nitrogen, and water without the use of an additional reagent, and requires strict air-to-fuel control to maintain high reduction effectiveness without increasing hydrocarbon emissions. For units of this usage (emergency back-up engine), neither SCR nor NSCR would be economically feasible considering the minimal emissions due to the limited use of the engines.

BACT for NO_x emissions from Generators #4 and #5 shall be the use of good combustion controls, proper operation and maintenance of the units, installation of EPA certified emergency stationary engines as required in 40 C.F.R. § 60.4205(b), and the emission limits listed in the tables below.

d. Carbon Monoxide (CO) and Volatile Organic Compounds (VOC)

CO and VOC emissions are a result of incomplete combustion, caused by conditions such as insufficient residence time or limited oxygen availability. CO and VOC emissions from distillate fuel-fired generators are generally controlled through proper operation and maintenance of the units. Oxidation catalysts have been used on large generators to reduce CO and VOC emission levels in the exhaust, but, like SCR and NSCR, use of an oxidation catalyst on an emergency

engine with limited yearly use would not provide a significant environmental benefit and would not be economically feasible. BACT for CO and VOC emissions from Generators #4 and #5 shall be proper operation and maintenance of the units, installation of EPA certified emergency stationary engines as required in 40 C.F.R. § 60.4205(b), and the emission limits listed in the tables below.

e. Visible Emissions
BACT for visible emissions from Generators #4 and #5 shall be the following:

Visible emissions from Generators #4 and #5 shall each not exceed 20% opacity on a six-minute block average basis.

2. BACT Emission Limits

The BACT emission limits for Generators #4 and #5 are based on the following:

PM/PM_{10}	- 0.12 lb/MMBtu from 06-096 C.M.R. ch. 103
SO_2	- combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO_x	- 3.2 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96
CO	- 0.85 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96
VOC	- 0.09 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96
Visible Emissions	- 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Generators #4 and #5 are the following:

Unit	Pollutant	lb/MMBtu
Generator #4	PM	0.12
Generator #5	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 #4	0.88	0.88	0.01	23.42	6.22	0.66
Generator #5	0.88	0.88	0.01	23.42	6.22	0.66

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

3. 40 C.F.R. Part 60, Subpart IIII

Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 C.F.R. Part 60, Subpart IIII is applicable to the emergency engines listed in this section since the units were ordered after July 11, 2005 and manufactured after April 1, 2006. [40 C.F.R. § 60.4200]

By meeting the requirements of 40 C.F.R. Part 60, Subpart IIII, the units also meet the requirements found in the *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 C.F.R. Part 63, Subpart ZZZZ. [40 C.F.R. § 63.6590(c)]

A summary of the currently applicable federal 40 C.F.R. Part 60, Subpart IIII requirements is listed below.

a. Emergency Engine Designation and Operating Criteria

Under 40 C.F.R. Part 60, 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 40 C.F.R. Part 60, 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, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

[40 C.F.R. §§ 60.4211(f) and 60.4219]

b. 40 C.F.R. Part 60, Subpart IIII Requirements

(1) Manufacturer Certification Requirement
The engines shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in 40 C.F.R. § 60.4202. MCC submitted an EPA certification for these engines in their Chapter 115 Air Emission License Application for this project dated December 15, 2020. [40 C.F.R. § 60.4205(b)]

(2) Ultra-Low Sulfur Fuel Requirement
The fuel fired in the engines shall not exceed 15 ppm sulfur (0.0015% sulfur). [40 C.F.R. § 60.4207(b)]

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

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

(5) Annual Time Limit for Maintenance and Testing
As emergency engines, the units shall each be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity). [40 C.F.R. § 60.4211(f)]

(6) Initial Notification Requirement
No initial notification is required under 40 C.F.R. Part 60, Subpart IIII for emergency engines. [40 C.F.R. § 60.4214(b)]

(7) Recordkeeping
MCC shall keep records that include maintenance conducted on the engines and the hours of operation of each engine recorded through the non-resettable hour meter. Documentation shall include the number of hours each unit operated for emergency purposes, the number of hours each unit operated for non-emergency purposes, and the reason each engine was in operation during each time. [40 C.F.R. § 60.4214(b)]

D. Annual Emissions

The table below provides an estimate of facility-wide annual emissions on a calendar year basis for the purposes of calculating the facility's annual air license fee. Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, unquantifiable fugitive particulate matter emissions are not included. Maximum potential emissions were calculated based on the following assumptions:

- A total heat input capacity for Boilers #1 and #2 of 51,000 MMBtu/yr based on firing natural gas and distillate fuel in any combination;
- Boilers #3-#8 operating 8,760 hours per year;
- Emergency Generators #1, #2, #3, #4, and #5 each operating 100 hours per year; and
- Paint Booth emissions of 1 ton per year of VOC.

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
Boilers #3-#8	7.88	7.88	0.09	3.78	12.86	0.84
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
Generator #4	0.04	0.04	0.01	1.17	0.31	0.03
Generator #5	0.04	0.04	0.01	1.17	0.31	0.03
Paint Booth	-	-	-	-	-	1.00
Total	**10.1**	**10.1**	**12.9**	**12.3**	**16.1**	**2.2**

* Worst 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.

Pollutant	Tons/year
Single HAP	9.9
Total HAP	24.9

Please note, this information provides the basis for fee calculation only and should not be construed to represent a comprehensive list of license restrictions or permissions. That information is provided in the Order section of this license.

III. AMBIENT AIR QUALITY ANALYSIS

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

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

The total licensed annual emissions for the facility are below the emission levels contained in the table above and there are no extenuating circumstances; therefore, an ambient air quality impact analysis is not required as part of this license amendment.

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 Amendment A-129-71-M-A subject to the conditions found in Air Emission License A-129-71-L-R/A and the following conditions.

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

SPECIFIC CONDITIONS

The following are new Conditions to Air Emission License A-129-71-L-R/A (July 15, 2016):

(24) **Boilers #3-#8**

A. Fuel

1. For Boilers #3-#8, each boiler is licensed to fire natural gas and is licensed to operate 8,760 hours per year. [06-096 C.M.R. ch. 115, BACT]
2. Compliance shall be demonstrated by fuel records showing the quantity, and type, of the fuel delivered or fuel used (if applicable). Records of annual fuel use shall be kept on a monthly and calendar year basis.
   [06-096 C.M.R. ch. 115, BACT]

B. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #3	PM	0.05	06-096 C.M.R. ch. 115, BACT
Boiler #4	PM	0.05	06-096 C.M.R. ch. 115, BACT
Boiler #5	PM	0.05	06-096 C.M.R. ch. 115, BACT
Boiler #6	PM	0.05	06-096 C.M.R. ch. 115, BACT
Boiler #7	PM	0.05	06-096 C.M.R. ch. 115, BACT
Boiler #8	PM	0.05	06-096 C.M.R. ch. 115, BACT

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

Emission Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #3	0.3	0.3	0.0035	0.14	0.49	0.03
Boiler #4	0.3	0.3	0.0035	0.14	0.49	0.03
Boiler #5	0.3	0.3	0.0035	0.14	0.49	0.03
Boiler #6	0.3	0.3	0.0035	0.14	0.49	0.03
Boiler #7	0.3	0.3	0.0035	0.14	0.49	0.03
Boiler #8	0.3	0.3	0.0035	0.14	0.49	0.03

D. Visible emissions from each boiler stack shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 3(A)(3)]

E. MCC shall be equipped with and operate low NOx burners on Boilers #3-#8. MCC shall provide documentation or field test reports verifying the burners were set up to achieve emission not to exceed 20 ppm of NO_x @ 3% O_2.

(25) **Generators #4 and #5**

A. Generators #4 and #5 shall each be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations.
[06-096 C.M.R. ch. 115, BACT]

B. Emissions shall not exceed the following:

Unit	Pollutant	lb/MM Btu	Origin and Authority
Generator #4	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)
Generator #5	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)

C. Emissions shall not exceed the following [06-096 C.M.R. ch. 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 #4	0.88	0.88	0.01	23.42	6.22	0.66
Generator #5	0.88	0.88	0.01	23.42	6.22	0.66

D. Visible Emissions

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

E. Generators #4 and #5 shall meet the applicable requirements of 40 C.F.R. Part 60, Subpart IIII, including the following:
[incorporated under 06-096 C.M.R. ch. 115, BACT]

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

2. Ultra-Low Sulfur Fuel
The fuel fired in the engines shall not exceed 15 ppm sulfur (0.0015% sulfur). Compliance with the fuel sulfur content limit shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of the tank containing the fuel to be fired. [40 C.F.R. § 60.4207(b) and 06-096 C.M.R. ch. 115, BPT]

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

4. Annual Time Limit for Maintenance and Testing
As emergency engines, Generator #4 and #5 shall each be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity). These limits are based on a calendar year. Compliance shall be demonstrated by records (electronic or written log) of all engine operating hours.
[40 C.F.R. § 60.4211(f) and 06-096 C.M.R. ch. 115, BPT]

5. Operation and Maintenance
Generator #4 and #5 shall be operated and maintained according to the manufacturer's emission-related written instructions. MCC may only change those emission-related settings that are permitted by the manufacturer. [40 C.F.R. § 60.4211(a)]

6. Recordkeeping
   MCC shall keep records that include maintenance conducted on the engines and the hours of operation of each engine recorded through the non-resettable hour meter. Documentation shall include the number of hours each unit operated for emergency purposes, the number of hours each unit operated for non-emergency purposes, and the reason each engine was in operation during each time. [40 C.F.R. § 60.4214(b)]

DONE AND DATED IN AUGUSTA, MAINE THIS 25th DAY OF FEBRUARY, 2021.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____ for ____
MELANIE LOYZIM, ACTING COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-129-71-L-R/A.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 12/18/2020
Date of application acceptance: 12/18/2020

Date filed with the Board of Environmental Protection:

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

FILED

FEB 25, 2021

State of Maine
Board of Environmental Protection