



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-N-R/A**

**Departmental
Findings of Fact and Order
Air Emission License
Renewal and
After-the-Fact 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 (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 Correction Center (MCC) of Windham, Maine has applied to renew their Air Emission License for the operation of emission sources associated with their correctional facility.

MCC has requested an after-the-fact amendment to their license in order to make the following changes:

1. Add a boiler that was found to not be an insignificant activity;
2. Remove wood working operations;
3. Remove paint shop operations; and
4. Remove the parts washer.

This license completes the processing of applications with the following submission numbers as assigned by the Department: 603662 and 603663 (both accepted 06/22/2026).

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

B. Emission Equipment

The following equipment is addressed in this air emission license:

Boilers

Equipment	Max. Capacity	Maximum Firing Rate	Fuel Type	Date of Manuf.	Date of Install.	Stack #
Steam Plant Boiler #1	16.7 MMBtu/hr	119.6 gal/hr	Distillate Fuel	1989	1989	1
Steam Plant Boiler #1	16.7 MMBtu/hr	16,410 scf/hr	Natural Gas	1989	1989	1
Steam Plant Boiler #2	16.7 MMBtu/hr	119.6 gal/hr	Distillate Fuel	1961	1969	1
Steam Plant Boiler #2	16.7 MMBtu/hr	16,410 scf/hr	Natural Gas	1961	1969	1
CUP Boiler #1	6.0 MMBtu/hr	5,825.24 scf/hr	Natural Gas	2019	2021	2
CUP Boiler #2	6.0 MMBtu/hr	5,825.24 scf/hr	Natural Gas	2019	2021	2
CUP Boiler #3	6.0 MMBtu/hr	5,825.24 scf/hr	Natural Gas	2019	2021	2
CUP Boiler #4	6.0 MMBtu/hr	5,825.24 scf/hr	Natural Gas	2019	2021	3
CUP Boiler #5	6.0 MMBtu/hr	5,825.24 scf/hr	Natural Gas	2019	2021	3
CUP Boiler #6	6.0 MMBtu/hr	5,825.24 scf/hr	Natural Gas	2019	2021	3
Maintenance Shop Boiler ^A	1.12 MMBtu/hr	1,098 scf/hr	Natural Gas	1989	1989	4
Maintenance Shop Boiler ^A	1.12 MMBtu/hr	8.0 gal/hr	Distillate Fuel	1989	1989	4

^A New to license.

MCC also has several small boilers not listed in the table above. These are considered insignificant emissions units because they are each rated below 1.0 MMBtu/hr, the heat input capacity at or above which would require their inclusion in the license; therefore, these small boilers are not addressed further in this license.

Stationary Engines

Equipment	Max. Input Capacity (MMBtu/hr)	Rated Output Capacity	Fuel Type	Firing Rate (gal/hr)	Date of Manuf.	Date of Install.
Steam Plant Generator #1	4.11	558 kW	Distillate Fuel	30	1981	1981
Steam Plant Generator #2	4.11	558 kW	Distillate Fuel	30	1981	1981

Equipment	Max. Input Capacity (MMBtu/hr)	Rated Output Capacity	Fuel Type	Firing Rate (gal/hr)	Date of Manuf.	Date of Install.
SMWRC Generator #3	3.04	300 kW	Distillate Fuel	22.2	2016	2016
CUP Generator #1	7.43	750 kW	Distillate Fuel	54.2	2018	2021
CUP Generator #2	7.43	750 kW	Distillate Fuel	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.

Records or Logs mean either hardcopy or electronic records.

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.

MCC has applied to renew currently licensed emission units as well as modify their license as addressed in Section I(A) above.

The modification of a minor source is considered a major or minor modification based on whether or not expected emission increases exceed the “Significant Emissions” levels as defined in the Department’s *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 maximum future licensed annual emissions, as follows:

Pollutant	Current License (tpy)	Future License (tpy)	Net Change (tpy)	Significant Emissions Levels
PM	10.1	10.3	+0.2	100
PM ₁₀	10.1	10.3	+0.2	100
PM _{2.5}	-	10.3	-	100

Pollutant	Current License (tpy)	Future License (tpy)	Net Change (tpy)	Significant Emissions Levels
SO ₂	12.9	0.1	-12.8	100
NO _x	12.3	13.0	+0.7	100
CO	16.1	16.5	+0.4	100
VOC	2.2	1.2	-1.0	50*

* MCC is located in an area of the state included in the Ozone Transport Region. Therefore, the significant emissions level for VOC is 50 tpy.

Therefore, this license is considered to be both a renewal and a minor modification and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules C.M.R. ch. 115.

E. Facility Classification

With the annual heat input limit on Steam Plant Boilers #1 and #2 and the operating hours restriction on the emergency generators, the facility is licensed as follows:

- As a synthetic minor source of air emissions for criteria pollutants, because MCC is subject to license restrictions that keep facility emissions below major source thresholds for NO_x; and
- As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for HAP.

II. **Best Practical Treatment (BPT)**

A. Introduction

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

BPT for 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.

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. Steam Plant Boilers #1 and #2

MCC operates Steam Plant Boilers #1 and #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. Steam Plant Boiler #1 was installed in 1989, and Steam Plant Boiler #2 was installed in 1969. Both boilers exhaust through a combined stack, Stack #1. In 2014, the burners were replaced in both boilers, but the change did not change the maximum design capacity of either boiler.

With limited exceptions, no person shall import, distribute, or offer for sale any distillate fuel with a sulfur content greater than 0.0015% by weight (15 ppm) pursuant to 38 M.R.S. § 603-A(2)(A)(3). Therefore, the distillate fuel purchased or otherwise obtained for use in Steam Plant Boilers #1 and #2 shall not exceed 0.0015% by weight (15 ppm).

1. BPT Findings

The BPT emission limits for Steam Plant Boilers #1 and #2 were based on the following:

Natural Gas

PM/PM₁₀/PM_{2.5} – 0.05 lb/MMBtu, 06-096 C.M.R. ch. 115, BPT
SO₂ – 0.6 lb/MMscf based on AP-42 Table 1.4-2 dated 4/26
NO_x – 100 lb/MMscf based on AP-42 Table 1.4-1 dated 4/26
CO – 84 lb/MMscf based on AP-42 Table 1.4-1 dated 4/26
VOC – 5.5 lb/MMscf based on AP-42 Table 1.4-2 dated 4/26
Visible Emissions – 06-096 C.M.R. ch. 101

Distillate Fuel

PM/PM₁₀/PM_{2.5} – 0.08 lb/MMBtu, 06-096 C.M.R. ch. 115, BPT
SO₂ – based on firing distillate fuel with a maximum sulfur content of 0.0015% by weight
NO_x – 20 lb/1,000 gal based on AP-42 Table 1.3-1 dated 5/10
CO – 5 lb/1,000 gal based on AP-42 Table 1.3-1 dated 5/10
VOC – 0.34 lb/1,000 gal based on AP-42 Table 1.3-3 dated 5/10
Visible Emissions – 06-096 C.M.R. ch. 101

The BPT emission limits for Steam Plant Boilers #1 and #2 are the following:

Unit	Fuel Type	Pollutant	lb/MMBtu
Steam Plant Boiler #1	Natural Gas	PM	0.05
Steam Plant Boiler #1	Distillate Fuel	PM	0.08
Steam Plant Boiler #2	Natural Gas	PM	0.05
Steam Plant Boiler #2	Distillate Fuel	PM	0.08

Unit	Fuel Type	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Steam Plant Boiler #1	Natural Gas	0.84	0.84	0.84	0.01	1.62	1.36	0.09
Steam Plant Boiler #1	Distillate Fuel	1.34	1.34	1.34	0.03	2.39	0.60	0.04
Steam Plant Boiler #2	Natural Gas	0.84	0.84	0.84	0.01	1.62	1.36	0.09
Steam Plant Boiler #2	Distillate Fuel	1.34	1.34	1.34	0.03	2.39	0.60	0.04

MCC's Steam Plant Boilers #1 and #2 shall be limited to a combined heat input limit of 51,000 MMBtu/yr on a calendar year total basis. Compliance shall be demonstrated by calculating heat input on a monthly and annual basis based on recordkeeping of the amount of each fuel used and the following emission factors:

Natural Gas: 0.00103 MMBtu/scf
Distillate Fuel: 0.14 MMBtu/gal

Documentation shall also include the sulfur content of any distillate fuel used.

2. Visible Emissions

Visible emissions from Stack #1 (shared by Steam Plant Boilers #1 and #2) shall not exceed 10% opacity on a six-minute block average basis when both Steam Plant Boilers #1 and #2 are firing only natural gas.

Visible emissions from Stack #1 (shared by Steam Plant Boilers #1 and #2) shall not exceed 20% opacity on a six-minute block average basis when either or both Steam Plant Boilers #1 and #2 are firing distillate fuel.

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

Steam Plant Boiler #1 was installed in March 1989, and Steam Plant Boiler #2 was installed in 1969. Due to the years of manufacture, the boilers 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]

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

Steam Plant 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 C.F.R. Part 63, Subpart JJJJJJ. Natural gas-fired units are exempt from the requirements of this regulation. [40 C.F.R. §§ 63.11195(e)]

Gas-fired boilers are exempt from 40 C.F.R. 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 C.F.R. § 63.11237]

In order to maintain the classification of gas-fired boilers, MCC may only fire distillate fuel in Steam Plant Boilers #1 and #2 during periods of gas curtailment or supply interruption (as defined in 40 C.F.R. § 63.11237 “Period of gas curtailment or supply interruption”), startups, or for periodic testing, maintenance, or operator training on liquid fuel. Periodic testing, maintenance, or operator training on liquid fuel shall not exceed a combined total of 48 hours during any calendar year.

Any boiler designed to burn fuels besides gaseous fuels prior to June 4, 2010, is considered an existing boiler under this rule. A boiler which currently fires gaseous fuels but converts back to firing another fuel (such as distillate fuel) in the future would become subject as an existing boiler at the time it is converted back to oil.

C. CUP Boilers #1 - #6

MCC operates CUP Boilers #1 - #6 for hot water. The boilers are Viessmann Model 300 CA3B 6.0 Condensing Boilers installed in 2021. The boilers are each

rated at 6.0 MMBtu/hr and fire natural gas. CUP Boilers #1 - #3 exhaust through a combined stack, Stack #2, and CUP Boilers #4 - #6 exhaust through a combined stack, Stack #3.

In Air Emission License A-129-71-M-A (02/25/2021), BACT for CUP Boilers #1 - #6 was determined to include the use of low NO_x burners.

1. BPT Findings

The BPT emission limits for CUP Boilers #1 - #6 were based on the following:

Natural Gas

PM/PM₁₀/PM_{2.5} – 0.05 lb/MMBtu, 06-096 C.M.R. ch. 115, BPT
SO₂ – 0.6 lb/MMscf based on AP-42 Table 1.4-2 dated 4/26
NO_x – 0.024 lb/MMBtu (based on 20 ppm NO_x @ 3% O₂ based on manufacturer data)
CO – 84 lb/MMscf based on AP-42 Table 1.4-1 dated 4/26
VOC – 5.5 lb/MMscf based on AP-42 Table 1.4-2 dated 4/26
Visible Emissions – 06-096 C.M.R. ch. 101

The BPT emission limits for CUP Boilers #1 - #6 are the following:

Unit	Pollutant	lb/MMBtu
CUP Boiler #1	PM	0.05
CUP Boiler #2	PM	0.05
CUP Boiler #3	PM	0.05
CUP Boiler #4	PM	0.05
CUP Boiler #5	PM	0.05
CUP Boiler #6	PM	0.05

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
CUP Boiler #1	0.30	0.30	0.30	-	0.14	0.49	0.03
CUP Boiler #2	0.30	0.30	0.30	-	0.14	0.49	0.03
CUP Boiler #3	0.30	0.30	0.30	-	0.14	0.49	0.03
CUP Boiler #4	0.30	0.30	0.30	-	0.14	0.49	0.03
CUP Boiler #5	0.30	0.30	0.30	-	0.14	0.49	0.03
CUP Boiler #6	0.30	0.30	0.30	-	0.14	0.49	0.03

2. Visible Emissions

Visible emissions from Stack #2 (from the combined exhaust of CUP Boilers #1 - #3) and Stack #3 (from the combined exhaust of CUP Boilers #4 - #6) shall each not exceed 10% opacity on a six-minute block average basis.

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

CUP Boilers #1 - #6 are each rated at 6.0 MMBtu/hr. Due to their sizes, CUP Boilers #1 - #6 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]

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

CUP Boilers #1 - #6 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. Natural gas-fired units are exempt from the requirements of this regulation. [40 C.F.R. §§ 63.11195(e)]

D. Maintenance Shop Boiler

MCC operates the Maintenance Shop Boiler for heat. The Maintenance Shop Boiler is a Well-McLain with a burner model #CR1-GO-12 Power Flame Burner rated at 1.12 MMBtu/hr and fires natural gas with distillate fuel as a back-up fuel. The boiler was installed in 1989 and exhausts through its own stack, Stack #4.

With limited exceptions, no person shall import, distribute, or offer for sale any distillate fuel with a sulfur content greater than 0.0015% by weight (15 ppm) pursuant to 38 M.R.S. § 603-A(2)(A)(3). Therefore, the distillate fuel purchased or otherwise obtained for use in the Maintenance Shop Boiler shall not exceed 0.0015% by weight (15 ppm).

1. BACT Findings

Following is a BACT analysis for control of emissions from the Maintenance Shop Boiler.

a. Particulate Matter (PM, PM₁₀, PM_{2.5})

MCC fires only low-ash content fuels (natural gas and distillate fuel) in the boiler. Additional add-on pollution controls are not economically feasible.

BACT for PM/PM₁₀/PM_{2.5} emissions from the Maintenance Shop Boiler is the use of good combustion practices and the emission limits listed in the tables below.

b. Sulfur Dioxide (SO₂)

MCC fires only natural gas and distillate fuel with a sulfur content not to exceed 0.0015% by weight. The use of these fuels results in minimal emissions of SO₂, and additional add-on pollution controls are not economically feasible.

BACT for SO₂ emissions from the Maintenance Shop Boiler is the use of natural gas and ultra-low-sulfur distillate fuel and the emission limits listed in the tables below.

c. Nitrogen Oxides (NO_x)

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

Both SCR and SNCR are technically feasible control technologies for minimizing NO_x. Both methods include injection of a NO_x reducing agent, typically ammonia or urea, into the boiler combustion gases, where the reagent reacts with NO_x to form nitrogen and water. Each technology is effective within a specific temperature range, 500 – 1,200 °F for SCR and 1,400 – 1,600 °F for SNCR. However, both SCR and SNCR have the 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 the Maintenance Shop Boiler.

Water/steam injection and FGR can attain similar NO_x reduction efficiencies through lowering burner flame temperature and thereby reducing thermal

NO_x formation. However, both control strategies reduce the boiler's fuel efficiency.

The aftermarket add-on controls of low-NO_x burners and an oxygen trim system are not economically feasible for a unit of this size.

BACT for NO_x emissions from the Maintenance Shop Boiler is the use of good combustion practices and the emission limits listed in the tables below.

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

Several control strategies were considered for the control of CO and VOC including oxidation catalysts, thermal oxidizers, and use of an oxygen trim system.

Oxidation catalysts and thermal oxidizers both have high capital, maintenance, and operational costs considering the size of the boiler in question. These controls were determined to be economically infeasible.

The use of an oxygen trim system has been determined to not be economically feasible.

BACT for CO and VOC emissions from the Maintenance Shop Boiler is the use of good combustion practices and the emission limits listed in the tables below.

e. Emission Limits

The BACT emission limits for the Maintenance Shop Boiler were based on the following:

Natural Gas

PM	– 0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
PM ₁₀ /PM _{2.5}	– 7.6 lb/MMscf based on AP-42 Table 1.4-2 dated 4/26
SO ₂	– 0.6 lb/MMscf based on AP-42 Table 1.4-2 dated 4/26
NO _x	– 100 lb/MMscf based on AP-42 Table 1.4-1 dated 4/26
CO	– 84 lb/MMscf based on AP-42 Table 1.4-1 dated 4/26
VOC	– 5.5 lb/MMscf based on AP-42 Table 1.4-2 dated 4/26
Visible Emissions	– 06-096 C.M.R. ch. 101

Distillate Fuel

PM/PM₁₀/PM_{2.5} – 0.08 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
SO₂ – based on firing distillate fuel with a maximum sulfur content of 0.0015% by weight
NO_x – 20 lb/1,000 gal based on AP-42 Table 1.3-1 dated 5/10
CO – 5 lb/1,000 gal based on AP-42 Table 1.3-1 dated 5/10
VOC – 0.34 lb/1,000 gal based on AP-42 Table 1.3-3 dated 5/10
Visible Emissions – 06-096 C.M.R. ch. 101

The BACT emission limits for the Maintenance Shop Boiler are the following:

Unit	Fuel Type	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Maintenance Shop Boiler	Natural Gas	0.06	0.01	0.01	-	0.11	0.09	0.01
Maintenance Shop Boiler	Distillate Fuel	0.09	0.09	0.09	-	0.16	0.04	-

2. Visible Emissions

When firing only natural gas, visible emissions from the Maintenance Shop Boiler shall not exceed 10% opacity on a six-minute block average basis.

When firing distillate fuel, visible emissions from the Maintenance Shop Boiler shall not exceed 20% opacity on a six-minute block average basis.

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

The Maintenance Shop Boiler is rated at 1.12 MMBtu/hr. Due to the size of the Boiler, the Maintenance Shop Boiler is 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]

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

The Maintenance Shop Boiler is 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. Natural gas-fired units are exempt from the requirements of this regulation. [40 C.F.R. §§ 63.11195(e)]

Gas-fired boilers are exempt from 40 C.F.R. 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 C.F.R. § 63.11237]

In order to maintain the classification of a gas-fired boiler, MCC may only fire distillate fuel in the Maintenance Shop Boiler during periods of gas curtailment or supply interruption (as defined in 40 C.F.R. § 63.11237 “Period of gas curtailment or supply interruption”), startups, or for periodic testing, maintenance, or operator training on liquid fuel. Periodic testing, maintenance, or operator training on liquid fuel shall not exceed a combined total of 48 hours during any calendar year.

Any boiler designed to burn fuels besides gaseous fuels prior to June 4, 2010, is considered an existing boiler under this rule. A boiler which currently fires gaseous fuels but converts back to firing another fuel (such as distillate fuel) in the future would become subject as an existing boiler at the time it is converted back to oil.

E. Steam Plant Generators #1 and #2, SMWRC Generator #3, and CUP Generators #1 and #2

MCC operates five emergency generators. The emergency generators are generator sets with each gen set consisting of an engine and an electrical generator.

Equipment	Max. Input Capacity	Rated Output Capacity	Date of Manuf.	Date of Install.
Steam Plant Generator #1	4.11 MMBtu/hr	558 kW	1981	1981
Steam Plant Generator #2	4.11 MMBtu/hr	558 kW	1981	1981
SMWRC Generator #3	3.04 MMBtu/hr	300 kW	2016	2016
CUP Generator #1	7.43 MMBtu/hr	750 kW	2018	2021
CUP Generator #2	7.43 MMBtu/hr	750 kW	2018	2021

1. BPT Findings

The BPT emission limits for Steam Plant Generators #1 and #2 are based on the following:

PM/PM₁₀/PM_{2.5} – 0.20 lb/MMBtu based on 06-096 C.M.R. ch. 103
 SO₂ – 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 Table 3.3-1 dated 4/25
 CO – 0.95 lb/MMBtu from AP-42 Table 3.3-1 dated 4/25
 VOC – 0.36 lb/MMBtu from AP-42 Table 3.3-1 dated 4/25
 Visible Emissions – 06-096 C.M.R. ch. 101

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

PM/PM₁₀/PM_{2.5} – 0.12 lb/MMBtu based on 06-096 C.M.R. ch. 103
 SO₂ – 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 Table 3.3-1 dated 4/25
 CO – 0.95 lb/MMBtu from AP-42 Table 3.3-1 dated 4/25
 VOC – 0.36 lb/MMBtu from AP-42 Table 3.3-1 dated 4/25
 Visible Emissions – 06-096 C.M.R. ch. 101

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

PM/PM₁₀/PM_{2.5} – 0.12 lb/MMBtu based on 06-096 C.M.R. ch. 103
 SO₂ – 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 4/25
 CO – 0.85 lb/MMBtu from AP-42 Table 3.4-1 dated 4/25
 VOC – 0.09 lb/MMBtu from AP-42 Table 3.4-1 dated 4/25
 Visible Emissions – 06-096 C.M.R. ch. 101

The BPT emission limits for the generators are the following:

Unit	Pollutant	lb/MMBtu
Steam Plant Generator #1	PM	0.20
Steam Plant Generator #2	PM	0.20
SMWRC Generator #3	PM	0.12
CUP Generator #1	PM	0.12
CUP Generator #2	PM	0.12

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Steam Plant Generator #1	0.82	0.82	0.82	0.01	18.13	3.90	1.48
Steam Plant Generator #2	0.82	0.82	0.82	0.01	18.13	3.90	1.48

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
SMWRC Generator #3	0.36	0.36	0.36	-	13.41	2.89	1.09
CUP Generator #1	0.89	0.89	0.89	0.01	23.78	6.32	0.67
CUP Generator #2	0.89	0.89	0.89	0.01	23.78	6.32	0.67

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 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. Visible Emissions

Steam Plant Generators #1 and #2

Visible emissions from the Steam Plant Generators #1 and #2 each shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time MCC shall either meet the normal operating visible emissions standard or the following work practice standards and alternative visible emissions standard.

- The duration of the startup shall not exceed 30 minutes per event;
- Visible emissions shall not exceed 50% opacity on a six-minute block average basis; and
- MCC shall keep records of the date, time, and duration of each startup.

Use of the work practice standards and alternative visible emissions standard in lieu of the normal operating standard is limited to no more than once per day.

Note: This does not limit the engine to one startup per day. It only limits the use of the alternative emission standard to once per day.

SMWRC Generator #3 and CUP Generators #1 and #2

Visible emissions from SMWRC Generator #3 and CUP Generators #1 and #2 shall each not exceed 20% opacity on a six-minute block average basis.

3. Chapter 169

Steam Plant Generators #1 and #2, SMWRC Generator #3, and CUP Generators #1 and #2 were each installed prior to the effective date of *Stationary Generators*, 06-096 C.M.R. ch. 169 and are therefore exempt from this rule pursuant to section 1.

4. New Source Performance Standards (NSPS)

Due to the dates of manufacture of the compression ignition emergency engines listed above, Steam Plant Generators #1 and #2 are not subject to the New Source Performance Standards (NSPS) *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE)*, 40 C.F.R. Part 60, Subpart IIII since the units were manufactured prior to April 1, 2006. [40 C.F.R. § 60.4200]

Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 C.F.R. Part 60, Subpart IIII is applicable to SMWRC Generator #3 and CUP Generators #1 and #2 since the units were ordered after July 11, 2005, and manufactured after April 1, 2006. [40 C.F.R. § 60.4200]

A summary of 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 of this subpart applicable to **non-emergency** engines.

(1) Emergency Situation Operation (On-Site)

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

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

(2) Non-Emergency Situation Operation

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

- (i) An emergency engine may be operated for a maximum of 100 hours per calendar year for maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government; the manufacturer; the vendor; the regional transmission organization or equivalent balancing authority and transmission operator; or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency 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. [40 C.F.R. § 60.4205(b)] SMWRC Generator #3's EPA certification was submitted with the application in April 2016, and CUP Generators #1 and #2's EPA certifications were submitted with their application in December 2020.

(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)]

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

(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 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)]

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

Pursuant to 40 C.F.R. § 63.6590(c), stationary compression ignition engines subject to regulations under 40 C.F.R. Part 60, Subpart IIII must meet the requirements of Subpart ZZZZ by meeting the requirements of 40 C.F.R. Part 60, Subpart IIII. No further requirements apply for SMWRC Generator #3 and CUP Generators #1 and #2 under Subpart ZZZZ. [40 C.F.R. § 63.6590(c)]

National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 C.F.R. Part 63, Subpart ZZZZ is not applicable to Steam Plant Boilers #1 and #2. The units are considered existing, emergency stationary reciprocating internal combustion engines at an area HAP source. However, they are considered exempt from the requirements of 40 C.F.R. Part 63, Subpart ZZZZ since they are categorized as institutional emergency engines and they do not operate or are not contractually obligated to be available in a demand response program, during a period of deviation from standard voltage or frequency, or for supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in 40 C.F.R. § 63.6640(f)(4)(ii).

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

F. General Process Emissions

Visible emissions from any general process source shall not exceed 20% opacity on a six-minute block average basis.

G. Fugitive Emissions

MCC shall not cause emissions of any fugitive dust during any period of construction, reconstruction, or operation without taking reasonable precautions. Such reasonable precautions shall be included in the facility's continuing program of best management practices for suppression of fugitive particulate matter. See 06-096 C.M.R. ch. 101, § 4(C) for a list of potential reasonable precautions.

MCC shall not cause or allow visible emissions within 20 feet of ground level, measured as any level of opacity and not including water vapor, beyond the legal boundary of the property on which such emissions occur. Compliance with this standard shall be determined pursuant to 40 C.F.R. Part 60, Appendix A, Method 22.

H. Annual Emissions

The table below provides an estimate of facility-wide annual emissions for the purposes of calculating the facility's annual air license fee and establishing the facility's potential to emit (PTE). Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, unquantifiable fugitive particulate matter emissions are not included except when required by state or federal regulations. Maximum potential emissions were calculated based on the following assumptions:

- A total heat input capacity for Steam Plant Boilers #1 and #2 of 51,000 MMBtu/yr based on firing natural gas and distillate fuel in any combination;
- Operating Steam Plant Generators #1 and #2, SMWRC Generator #3, and CUP Generators #1 and #2 for 100 hrs/yr of non-emergency operation each;
- Operating the CUP Boilers #1 - #6 and the Maintenance Shop Boiler for 8,760 hr/yr each; and
- Emissions from Steam Plant Boilers #1 and #2 and the Maintenance Shop Boiler were calculated using the worst-case emission factors of firing distillate fuel for PM, PM₁₀, PM_{2.5}, SO₂, and NO_x and of firing natural gas for CO and VOC.

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

**Total Licensed Annual Emissions for the Facility
Tons/year**

(used to calculate the annual license fee)

	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	VOC
Steam Plant Boilers #1 and #2	2.0	2.0	2.0	-	3.6	2.1	0.1
CUP Boilers #1 - #6	7.9	7.9	7.9	0.1	3.8	12.9	0.8
Steam Plant Generator #1	-	-	-	-	0.9	0.2	0.1
Steam Plant Generator #2	-	-	-	-	0.9	0.2	0.1
SMWRC Generator #3	-	-	-	-	0.7	0.1	0.1
CUP Generator #1	-	-	-	-	1.2	0.3	-
CUP Generator #2	-	-	-	-	1.2	0.3	-
Maintenance Shop Boiler	0.4	0.4	0.4	-	0.7	0.4	-
Total TPY	10.3	10.3	10.3	0.1	13.0	16.5	1.2

Pollutant	Tons/year
Single HAP	7.9
Total HAP	19.9

III. Ambient Air Quality Analysis

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

Pollutant	Tons/Year
PM ₁₀	25
PM _{2.5}	15
SO ₂	50
NO _x	50
CO	250

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

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

Order

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards, and
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-129-71-N-R/A subject to the following conditions.

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

Standard Conditions

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S. § 347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to beginning actual construction of a modification, unless specifically provided for in Chapter 115. [06-096 C.M.R. ch. 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the

control technology analysis or the ambient air quality standards analysis, or both. [06-096 C.M.R. ch. 115]

- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 C.M.R. ch. 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S. § 353-A. [06-096 C.M.R. ch. 115] Payment of the annual air emission license fee for MCC is due by the end of November of each year. [38 M.R.S. § 353-A(3)]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 C.M.R. ch. 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 C.M.R. ch. 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 C.M.R. ch. 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 C.M.R. ch. 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 C.M.R. ch. 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 C.F.R. Part 60 or other method approved or required by the Department, the licensee shall:

- A. Perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - 1. Within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 - 2. Pursuant to any other requirement of this license to perform stack testing.
 - B. Install or make provisions to install test ports that meet the criteria of 40 C.F.R. Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - C. Submit a written report to the Department within thirty (30) days from date of test completion.
[06-096 C.M.R. ch. 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. Within thirty (30) days following receipt of the written test report by the Department, or another alternative timeframe approved by the Department, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 C.F.R. Part 60 or other method approved or required by the Department; and
 - B. The days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - C. The licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
[06-096 C.M.R. ch. 115]

- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or license requirement. [06-096 C.M.R. ch. 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 C.M.R. ch. 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 C.M.R. ch. 115]
- (16) The licensee shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S. § 605).

Specific Conditions

(17) **Steam Plant Boilers #1 and #2, CUP Boilers #1 - #6, and Maintenance Shop Boiler**

A. Fuel

1. Steam Plant Boilers #1 and #2 and Maintenance Shop Boiler are each licensed to fire natural gas with distillate fuel as a back-up fuel. [06-096 C.M.R. ch. 115, BPT]
2. CUP Boilers #1 - #6 are each licensed to fire natural gas. [06-096 C.M.R. ch. 115, BPT]
3. Total fuel use for Steam Plant Boilers #1 and #2 shall not exceed 51,000 MMBtu/yr, based on a calendar year total basis. Compliance shall be demonstrated by recordkeeping of fuel usage and calculating on a monthly and annual basis using emission factors of 1,030 Btu/scf for natural gas and 0.14 MMBtu/gal for distillate fuel. [06-096 C.M.R. ch. 115, BPT]

4. The facility shall not purchase or otherwise obtain distillate fuel with a sulfur content that exceeds 0.0015% by weight (15 ppm). [06-096 C.M.R. ch. 115, BPT]
5. Fuel sulfur content compliance shall be demonstrated by fuel delivery receipts from the supplier, a statement from the supplier that the fuel delivered meets Maine's fuel sulfur content standards, certificate of analysis, or testing of fuel in the tank on-site. [06-096 C.M.R. ch. 115, BPT]

B. Emissions shall not exceed the following:

Emission Unit	Fuel Type	Pollutant	lb/MMBtu	Origin and Authority
Steam Plant Boiler #1	Natural Gas	PM	0.05	06-096 C.M.R. ch. 115, BPT
Steam Plant Boiler #1	Distillate Fuel	PM	0.08	06-096 C.M.R. ch. 115, BPT
Steam Plant Boiler #2	Natural Gas	PM	0.05	06-096 C.M.R. ch. 115, BPT
Steam Plant Boiler #2	Distillate Fuel	PM	0.08	06-096 C.M.R. ch. 115, BPT
CUP Boiler #1	Natural Gas	PM	0.05	06-096 C.M.R. ch. 115, BPT
CUP Boiler #2	Natural Gas	PM	0.05	06-096 C.M.R. ch. 115, BPT
CUP Boiler #3	Natural Gas	PM	0.05	06-096 C.M.R. ch. 115, BPT
CUP Boiler #4	Natural Gas	PM	0.05	06-096 C.M.R. ch. 115, BPT
CUP Boiler #5	Natural Gas	PM	0.05	06-096 C.M.R. ch. 115, BPT
CUP Boiler #6	Natural Gas	PM	0.05	06-096 C.M.R. ch. 115, BPT

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

Emission Unit	Fuel Type	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Steam Plant Boiler #1	Natural Gas	0.84	0.84	0.84	0.01	1.62	1.36	0.09
Steam Plant Boiler #1	Distillate Fuel	1.34	1.34	1.34	0.03	2.39	0.60	0.04
Steam Plant Boiler #2	Natural Gas	0.84	0.84	0.84	0.01	1.62	1.36	0.09
Steam Plant Boiler #2	Distillate Fuel	1.34	1.34	1.34	0.03	2.39	0.60	0.04
CUP Boiler #1	Natural Gas	0.30	0.30	0.30	-	0.14	0.49	0.03
CUP Boiler #2	Natural Gas	0.30	0.30	0.30	-	0.14	0.49	0.03
CUP Boiler #3	Natural Gas	0.30	0.30	0.30	-	0.14	0.49	0.03
CUP Boiler #4	Natural Gas	0.30	0.30	0.30	-	0.14	0.49	0.03

Emission Unit	Fuel Type	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
CUP Boiler #5	Natural Gas	0.30	0.30	0.30	-	0.14	0.49	0.03
CUP Boiler #6	Natural Gas	0.30	0.30	0.30	-	0.14	0.49	0.03
Maintenance Shop Boiler	Natural Gas	0.06	0.01	0.01	-	0.11	0.09	0.01
Maintenance Shop Boiler	Distillate Fuel	0.09	0.09	0.09	-	0.16	0.04	-

D. Visible Emissions

1. During periods of time when only natural gas is fired in Steam Plant Boilers #1 and #2, visible emissions from Stack #1 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101 §§ 4(A)(3) and 4(D)(1)]
2. During periods of time when distillate fuel is fired in either Steam Plant Boiler #1 and/or Steam Plant Boiler #2, visible emissions from Stack #1 shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101 §§ 4(A)(2) and 4(D)(1)]
3. Visible emissions from Stack #2 and from Stack #3 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101 §§ 4(A)(3) and 4(D)(1)]
4. When firing only natural gas, visible emissions from the Maintenance Shop Boiler shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101 § 4(A)(3)]
5. When firing distillate fuel, visible emissions from the Maintenance Shop Boiler shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101 § 4(A)(2)]

E. Operational Limitation

MCC may only fire distillate fuel in Steam Plant Boilers #1 and #2 and the Maintenance Shop Boiler during periods of gas curtailment or supply interruption (as defined in 40 C.F.R. § 63.11237 "Period of gas curtailment or supply interruption"), startups, or for periodic testing, maintenance, or operator training on liquid fuel. Periodic testing, maintenance, or operator training on liquid fuel shall not exceed a combined total of 48 hours during any calendar year. [06-096 C.M.R. ch. 115, BPT]

- F. MCC shall ensure CUP Boilers #1 - #6 are equipped with and operating low NO_x burners. MCC shall provide documentation or field test results verifying the burners were set up to achieve NO_x emissions not to exceed 20 ppm of NO_x @ 3% O₂. [06-096 C.M.R. ch. 115, BPT]

(18) **Steam Plant Generators #1 and #2, SMWRC Generator #3, and CUP Generators #1 and #2**

- A. Each of the emergency generators shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 C.M.R. ch. 115, BPT]
- B. MCC shall keep records that include maintenance conducted on the engines and the hours of operation of each engines recorded through the non-resettable hour meter. Documentation shall include the number of hours each unit operated for emergency purposes, the number of hours each unit operated for non-emergency purposes, and the reason the engine was in operation during each time. [06-096 C.M.R. ch. 115, BPT]
- C. The fuel sulfur content for Steam Plant Generators #1 and #2, SMWRC Generator #3, and CUP Generators #1 and #2 shall be limited to 0.0015% sulfur by weight. Compliance shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of the fuel in the tank on-site. [06-096 C.M.R. ch. 115, BPT]
- D. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Steam Plant Generator #1	PM	0.20	06-096 C.M.R. ch. 103, § (2)(A)(1)
Steam Plant Generator #2	PM	0.20	06-096 C.M.R. ch. 103, § (2)(A)(1)
SMWRC Generator #3	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)
CUP Generator #1	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)
CUP Generator #2	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)

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

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Steam Plant Generator #1	0.82	0.82	0.82	0.01	18.13	3.90	1.48
Steam Plant Generator #2	0.82	0.82	0.82	0.01	18.13	3.90	1.48
SMWRC Generator #3	0.36	0.36	0.36	-	13.41	2.89	1.09
CUP Generator #1	0.89	0.89	0.89	0.01	23.78	6.32	0.67
CUP Generator #2	0.89	0.89	0.89	0.01	23.78	6.32	0.67

F. Visible Emissions

1. Steam Plant Generators #1 and #2

Visible emissions from each of the Steam Plant Generators #1 and #2 shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time MCC shall either meet the normal operating visible emissions standard or the following work practice standards and alternative visible emissions standard.

- The duration of the startup shall not exceed 30 minutes per event;
- Visible emissions shall not exceed 50% opacity on a six-minute block average basis; and
- MCC shall keep records of the date, time, and duration of each startup.

Use of the work practice standards and alternative visible emissions standard in lieu of the normal operating standard is limited to no more than once per day.

Note: This does not limit the engine to one startup per day. It only limits the use of the alternative emission standard to once per day.

[06-096 C.M.R. ch. 101, § 4(A)(4)]

2. SMWRC Generator #3 and CUP Generators #1 and #2

Visible emissions from SMWRC Generator #3 and CUP Generators #1 and #2 shall each not exceed 20% opacity on a six-minute block average basis.
[06-096 C.M.R. ch. 101, § 4(A)(4)]

G. Emergency generators and/or fire pumps are only to be operated for maintenance purposes and for situations arising from sudden and reasonably

unforeseeable events beyond the control of the source. Emergency generators and/or fire pumps are not to be used for prime power when reliable offsite power is available; nor to operate or to be contractually obligated to be available in a demand response program, during a period of deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity. [06-096 C.M.R. ch. 115, BPT]

H. The SMWRC Generator #3 and CUP Generators #1 and #2 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, BPT]

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 C.F.R. § 60.4205(b)] SMWRC Generator #3's EPA certification was submitted with the application in April 2016 and CUP Generators #1 and #2's EPA certifications were submitted with their application in December 2020.

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 fuel in the tank on-site. [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

a. 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). 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]

- b. MCC shall keep records that include 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)]

5. Operation and Maintenance

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)]

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

(19) **General Process Sources**

Visible emissions from any general process source shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(B)(4)]

(20) **Fugitive Emissions**

- A. MCC shall not cause emissions of any fugitive dust during any period of construction, reconstruction, or operation without taking reasonable precautions. Such reasonable precautions shall be included in the facility's continuing program of best management practices for suppression of fugitive particulate matter. See 06-096 C.M.R. ch. 101, § 4(C) for a list of potential reasonable precautions.
- B. MCC shall not cause or allow visible emissions within 20 feet of ground level, measured as any level of opacity and not including water vapor, beyond the legal boundary of the property on which such emissions occur. Compliance with this standard shall be determined pursuant to 40 C.F.R. Part 60, Appendix A, Method 22.

[06-096 C.M.R. ch. 101, § 4(C)]

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Departmental
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(21) **Additional Information**

If the Department determines that any parameter value pertaining to construction and operation of the emissions units, including but not limited to stack size, configuration, flow rate, emission rates, nearby structures, etc., deviates from what was submitted in the application or ambient air quality impact analysis for this air emission license, MCC may be required to submit additional information. Upon written request from the Department, MCC shall provide information necessary to demonstrate ambient air quality standards (AAQS) will not be exceeded, potentially including submission of an ambient air quality impact analysis or an application to amend this air emission license to resolve any deficiencies and ensure compliance with AAQS. Submission of this information is due within 60 days of the Department's written request unless otherwise stated in the Department's letter. [06-096 C.M.R. ch. 115, § 2(O)]

Done and Dated in Augusta, Maine this 4th day of AUGUST, 2026.

Department of Environmental Protection

BY:


for Melanie Loyzim, Commissioner

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

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

Please note attached sheet for guidance on appeal procedures.

Date of initial receipt of application: June 11, 2026

Date of application acceptance: June 22, 2026

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