Central Maine Commerce Center, L.P.
Kennebec County
Augusta, Maine
A-558-71-S-R/A (SM)

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

FINDINGS OF FACT

After review of the air emission license renewal/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

Central Maine Commerce Center, LP (CMCC) has applied to renew their Air Emission License permitting the operation of emission sources associated with their multi-tenant office building. CMCC has also requested an amendment to their license in order to replace Boiler #1[1] from the previous license with a new Boiler #1 and to note the installation of a gas conversion burner on Boiler #2. The equipment addressed in this license is located at 45 Commerce Drive, Augusta, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Boilers

Equipment	Maximum Input Capacity (MMBtu/hr)	Maximum Firing Rate (Multiple Units)	Fuel Type, % sulfur	Date of Manuf.	Stack #
Boiler #1 (New)	8.1	58 gal/hr	Distillate Fuel[2], 0.5% by weight	2015	#1
		7500 scf/hr	Natural Gas		
Boiler #2	8.4	8673 scf/hr	Natural Gas	1979	#1

[1] The replaced "Boiler #1" will not be addressed further in this license.
[2] Boilers #1 s the ability to fire distillate fuel, but it will be firing natural gas as its primary fuel.

Generators

Equipment	Output Capacity KW	Maximum Input Capacity (MMBtu/hr)	Firing Rate (gal/hr)	Fuel Type, % sulfur	Date of Manuf.	Stack #
Emergency Gen #3	90	1.1	7.8	Distillate Fuel, 0.0015% by weight	1979	#2
Emergency Gen #4	300	2.8	21.8	Distillate Fuel, 0.0015% by weight	2004	NA
Emergency Gen #5	650	7.6	58.9	Distillate Fuel, 0.0015% by weight	2004	NA
Emergency Gen #8	650	7.6	58.9	Distillate Fuel, 0.0015% by weight	2004	NA
Emergency Gen #9	60	0.84	6.1	Distillate Fuel, 0.0015% by weight	2010	NA
Emergency Gen #10	25	0.45	4.7	Propane, Negl. sulfur	2005	NA

Fire Pumps

Equipment	Horse Power (HP)	Maximum Capacity (MMBtu/hr)	Firing Rate (gal/hr)	Fuel Type, % sulfur	Date of Manuf.	Stack #
Fire Pump #6	175	1.3	9.4	Distillate Fuel, 0.0015%	1980	#3
Fire Pump #7	175	1.3	9.4	Diesel Fuel, 0.0015%	1980	#4

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 application for CMCC includes the licensing of increased emissions and the installation of new or modified equipment. The license is therefore considered to be both a renewal and an amendment of the current air emission license per *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (CMR) 115 (as amended). With operating hours restrictions on the emergency engines, CMCC is licensed below the major source thresholds for criteria pollutants and is considered a

synthetic minor. Because of the restrictions, CMCC is also licensed below the major source thresholds for hazardous air pollutants (HAP) and is considered an area source of HAP.

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	1.55	3.8	+2.25	100
PM_{10}	1.55	3.8	+2.25	100
SO_2	5.50	5.2	-0.30	100
NO_x	22.67	11.1	-11.57	100
CO	5.58	7.0	+1.42	100
VOC	1.04	0.6	-0.44	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 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 and #2

CMCC operates two boilers, Boiler #1 and Boiler #2, for heating purposes. The boilers are rated at 8.1 MMBtu/hr and 8.4 MMBtu/hr respectively. They each fire natural gas, and Boiler #1 can also operate using distillate fuel. Boiler #2 was previously licensed to fire distillate fuel, but its new conversion burner is only rated for natural gas. The boilers were installed in 2015 and 1980, respectively, and they exhaust through the same stack, Stack #1.

1. Boiler #1 BACT and Boiler #2 BPT

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

Natural Gas for Boilers #1 and #2

PM/PM_{10}	–	0.05 lb/MMBtu based on 06-096 CMR 115, BPT/BACT
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
Visible Emissions	–	06-096 CMR 115, BPT/BACT

Distillate Fuel for Boiler #1

PM/PM_{10}	–	0.08 lb/MMBtu based on 06-096 CMR 115, BPT/BACT
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
Visible Emissions	–	06-096 CMR 115, BACT

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

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

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler # 1 Natural gas	0.41	0.41	0.01	0.75	0.63	0.04
Boiler #2 Natural gas	0.42	0.42	0.01	0.87	0.73	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 Distillate Fuel	0.65	0.65	4.05	1.16	0.29	0.02

Visible emissions from Boiler #1 and Boiler #2 shall each not exceed 10% opacity on a six-minute block average basis.

Boiler #1 shall be limited to 150,000 gallons of distillate fuel on a calendar year basis.

2. 40 CFR Part 60, Subpart Dc

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

3. 40 CFR Part 63, Subpart JJJJJJ

The federal regulation found at 40 CFR Part 63, Subpart JJJJJJ, *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, is applicable to industrial, commercial, or institutional boilers, as defined in the Subpart, which are located at or are part of an area source of HAP.

Because both Boiler #1 and Boiler #2 fire natural gas as their primary fuel, they 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).

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 §63.11237]

Any boiler designed to burn fuels besides gaseous fuels prior to June 4, 2010, will be 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. Generators #3,#4, #5, #8, #9, and #10 and Fire Pumps #6, #7

CMCC operates five emergency generators manufactured before 2006 and one manufactured after 2006. The emergency generators are generator sets with each set consisting of an engine and an electrical generator. The emergency generators have engines rated at 1.1 MMBtu/hr, 2.8 MMBtu/hr, 7.6 MMBtu/hr, 7.6 MMBtu/hr, 0.84 MMBtu/hr and 0.45 MMBtu/hr respectively which all fire distillate fuel except for Generator #10 (0.45 MMBtu/hr) which fires propane. The emergency generators were manufactured in 1979, 2004, 2004, 2004, 2010, and 2005, respectively. Generator #10 is sized below the licensing threshold, so while it is still subject to applicable federal regulations, it will not be required to meet lb/hr emission limits in this license.

CMCC operates Fire Pumps #6, and #7. The Fire Pumps have engines both rated at 1.3 MMBtu/hr which fire distillate fuel. The fire pumps were both manufactured in 1980.

1. BPT for Generators #3, #4, #5, #8 and #9 and Fire Pumps #6 and #7

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

Generators #3, #4 and #9 and Fire Pumps #6 and #7

PM/PM_{10}	- 0.31 lb/MMBtu [AP-42 table 3.3-1, dated 10/96]
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 [AP-42 table 3.3-1 dated 10/96]
CO	- 0.95 lb/MMBtu [AP-42 table 3.3-1 dated 10/96]
VOC	- 0.36 lb/MMBtu [AP-42 table 3.3-1 dated 10/96]
Visible Emissions	- [06-096 CMR 101]

Generators #5 and #8

PM/PM_{10}	- 0.12 lb/MMBtu [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	- 3.2 lb/MMBtu [AP-42 table 3.4-1 dated 10/96]
CO	- 0.85 lb/MMBtu [AP-42 table 3.4-1 dated 10/96]
VOC	- 0.09 lb/MMBtu [AP-42 table 3.4-1 dated 10/96]
Visible Emissions	- [06-096 CMR 101]

The BPT emission limits for the generators are the following:

Unit	Pollutant	lb/MMBtu
Generator #5	PM	0.12
Generator #8	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 (1.1 MMBtu/hr) Distillate fuel	0.34	0.34	0.01	4.85	1.05	0.40
Generator #4 (2.8 MMBtu/hr) Distillate fuel	0.87	0.87	0.01	12.35	2.66	1.01
Generator #5 (7.6 MMBtu/hr) Distillate fuel	0.91	0.91	0.01	24.32	6.46	0.68
Generator #8 (7.6 MMBtu/hr) Distillate fuel	0.91	0.91	0.01	24.32	6.46	0.68
Generator #9 (0.84 MMBtu/hr) Distillate fuel	0.26	0.26	0.01	3.70	0.80	0.30

Visible emissions from each of the distillate fuel-fired emergency generators shall not exceed 20% opacity on a six-minute block average basis, except for no more than two six-minute block averages in a three-hour period.

The BPT Emission limits for the fire pumps are the following:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Fire Pump #6 (1.3 MMBtu/hr) Distillate fuel	0.40	0.40	0.01	5.73	1.24	0.47
Fire Pump #7 (1.3 MMBtu/hr) Distillate fuel	0.40	0.40	0.01	5.73	1.24	0.47

Visible emissions from each of the distillate fuel-fired fire pumps shall not exceed 20% opacity on a six-minute block average basis, except for no more than two six-minute block averages in a three-hour period.

2. Emergency Definition:

Each generator and fire pump operated by CMCC is an Emergency stationary ICE.

a. Emergency Engine Designation and Operating Criteria

Under 40 CFR Part 60, Subparts IIII and JJJJ and 40 CFR Part 60, Subpart ZZZZ, 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.

The emergency generators operated by CMCC shall be limited to the usage outlined in §63.6640(f) and therefore may be classified as an existing emergency stationary RICE as defined in 40 CFR Part 63, Subpart ZZZZ. Failure to comply with all of the requirements listed in §63.6640(f) may cause these engines to not be considered emergency engines and therefore subject to all the requirements for non-emergency engines.

[40 CFR §60.4211(f), §60.4219, and §63.6640(f)]

3. 40 CFR Part 60, Subpart JJJJ

The federal regulation 40 CFR Part 60, Subpart JJJJ, *Standards of Performance for Spark Ignition Internal Combustion Engines (SI ICE)* is applicable to emergency engines that fire natural gas and propane which were ordered after June 12, 2006 and manufactured after January 1, 2009. While Generator #10 fires propane and was ordered after June 12, 2006, it was manufactured before January 1, 2009 and is therefore not subject to the requirements of this subpart. All other emergency engines operated by CMCC are compression ignition engines that fire distillate fuel and are also not subject to requirements of this subpart.

4. 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 Generator #9 because it 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.

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 the engine. [40 CFR §60.4209(a)]

(4) Operation and Maintenance Requirements
The engines shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by CMCC that are approved by the engine manufacturer. CMCC 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 for emergency engines. [40 CFR §60.4214(b)]

(7) Recordkeeping
CMCC 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), CMCC 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)]

5. 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 within Generators #3, #4, #5, #8, and #10 and Fire Pumps #6 and #7, 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 commercial 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.

6. Additional Requirements: Generators #3, #4, #5, #8, and #10 and Fire Pumps #6 and #7

Generators #3, #4, #5, #8, and #10 and Fire Pumps #6 and #7 are not subject to any federal standards and must therefore meet the following requirements:
Each emergency engine 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, the CMCC shall keep records of the total hours of operation and the hours of emergency operation for each unit.

Generators #3, #4, #5, #8, and #10 and Fire Pumps #6 and #7 are only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. The 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.

D. Annual Emissions

1. Total Annual Emissions

CMCC shall be restricted to the following annual emissions on a calendar year basis. The tons per year limits for the boilers were calculated based 8760 hours of operation of Boiler #2 and on a yearly distillate fuel limit of 150,000 gallons for Boiler #1 and no limit on natural gas, where the fuel with the highest tons per year limit per

pollutant was used. For the five emergency generators and two fire pumps, the tons per year limits were based on 100 hours of operation for each.

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

	PM	PM_{10}	SO_2	NO_x	CO	VOC
Boiler #1, Distillate Fuel	--	--	5.06	--	--	--
Boiler #1, Natural Gas	1.77	1.77	--	3.29	2.76	0.18
Boiler #2	1.84	1.84	0.02	3.80	3.19	0.21
Generator #3	0.02	0.02	0.01	0.24	0.05	0.02
Generator #4	0.04	0.04	0.01	0.62	0.13	0.05
Generator #5	0.05	0.05	0.01	1.22	0.32	0.03
Fire Pump #6	0.02	0.02	0.01	0.29	0.06	0.02
Fire Pump #7	0.02	0.02	0.01	0.29	0.06	0.02
Generator #8	0.05	0.05	0.01	1.22	0.32	0.03
Generator #9	0.01	0.01	0.01	0.19	0.04	0.02
Total TPY	**3.8**	**3.8**	**5.2**	**11.1**	**7.0**	**0.6**

2. Greenhouse Gases

Greenhouse gases are considered regulated pollutants as of January 2, 2011, through 'Tailoring' revisions made to EPA's *Approval and Promulgation of Implementation Plans,* 40 CFR Part 52, Subpart A, §52.21, *Prevention of Significant Deterioration of Air Quality* rule. Greenhouse gases, as defined in 06-096 CMR 100 (as amended), are the aggregate group of the following gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. For licensing purposes, greenhouse gases (GHG) are calculated and reported as carbon dioxide equivalents (CO_2e).

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

- 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 CMCC 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-558-71-S-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 CMCC'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 CMCC'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 CMCC'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 CMCC 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. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #1 Natural gas	PM	0.05	06-096 CMR 115, BACT
Boiler #1 Distillate fuel	PM	0.08	06-096 CMR 115, BACT
Boiler #2 Natural gas	PM	0.05	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 Natural gas	0.41	0.41	0.01	0.75	0.63	0.04
Boiler #1 Distillate fuel	0.65	0.65	4.05	1.16	0.29	0.02
Boiler #2 Natural gas	0.42	0.42	0.01	0.87	0.73	0.05

Visible emissions from each boiler shall not exceed 10% opacity on a six-minute block average basis. [06-096 CMR 115]

(17) **Generators #3, #4, #5, #8, #9, and #10 and Fire Pumps #6 and #7**

A. The fuel sulfur content for Generators #3, #4, #5, #8, and #9 and Fire Pumps #6 and #7 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]

B. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Generator #5	PM	0.12	06-096 CMR 103(2)(B)(1)(a)
Generator #8	PM	0.12	06-096 CMR 103(2)(B)(1)(a)

C. 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 #3 (1.1 MMBtu/hr) Distillate fuel	0.34	0.34	0.01	4.85	1.05	0.40
Generator #4 (2.8 MMBtu/hr) Distillate fuel	0.87	0.87	0.01	12.35	2.66	1.01
Generator #5 (7.6 MMBtu/hr) Distillate fuel	0.91	0.91	0.01	24.32	6.46	0.68
Generator #8 (7.6 MMBtu/hr) Distillate fuel	0.91	0.91	0.01	24.32	6.46	0.68
Generator #9 (0.84 MMBtu/hr) Distillate fuel	0.26	0.26	0.01	3.70	0.80	0.30
Fire Pump #6 (1.3 MMBtu/hr) Distillate fuel	0.40	0.40	0.01	5.73	1.24	0.47
Fire Pump #7 (1.3 MMBtu/hr) Distillate fuel	0.40	0.40	0.01	5.73	1.24	0.47

D. Visible Emissions

Visible emissions from each of the distillate fuel-fired emergency engines shall not exceed 20% opacity on a six-minute block average basis, except for no more than two six-minute block averages in a three-hour period. [06-096 CMR 101]

E. Generator #9 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. CMCC 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), CMCC 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 CMCC that are approved by the engine manufacturer. CMCC may only change those emission-related settings that are permitted by the manufacturer. [40 CFR §60.4211(a)]

F. Generators #3, #4, #5, #8, and #10 and Fire Pumps #6 and #7 shall meet the following requirements:

1. Each emergency engine 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, the CMCC shall keep records of the total hours of operation and the hours of emergency operation for each unit.

2. Generators #3, #4, #5, #8, and #10 and Fire Pumps #6 and #7 are only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. The 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) CMCC 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 27 DAY OF May , 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: 03/17/2016
Date of application acceptance: 03/21/2016

Date filed with the Board of Environmental Protection:

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

Filed
MAY 31 2016
State of Maine
Board of Environmental Protection