



DEPARTMENT ORDER

MaineGeneral Medical Center –  
Thayer Campus  
Kennebec County  
Waterville, Maine  
A-438-71-M-A

Departmental  
Findings of Fact and Order  
Air Emission License  
Amendment #3

FINDINGS OF FACT

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

I. REGISTRATION

A. Introduction

MaineGeneral Medical Center – Thayer Campus (MGMC) was issued Air Emission License A-438-71-J-R/A on November 5, 2012, for the operation of emission sources associated with their healthcare facility. The license was subsequently amended on July 24, 2015 (A-438-71-K-A), and on February 20, 2018 (A-438-71-L-M).

MGMC has requested an amendment to their license in order to replace Boiler #3 with a new boiler, Boiler #5, and to remove Boiler #3 from their license. The Department is also using this amendment as an opportunity to clarify the recordkeeping required by *Emission Statements*, 06-096 Code of Maine Rules (C.M.R.) ch. 137.

The equipment addressed in this license amendment is located at 149 North Street, Waterville, Maine.

B. Emission Equipment

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

**Boiler**

<u>Equipment</u>	<u>Max. Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate</u>	<u>Fuel Type, % sulfur</u>	<u>Date of Manuf.</u>	<u>Date of Install.</u>	<u>Stack #</u>
Boiler #5	8.4	8,400 scf/hr	Natural gas, negl.	2018	2018	1
		60 gal/hr	Distillate fuel, 0.0015%			

Boiler #3 (10.8 MMBtu/hr) is being removed from the facility and is hereby removed from this air emission license.

C. Definitions

Distillate Fuel. For the purposes of this license, *distillate fuel* means the following:

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

D. Application Classification

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

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 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:

<u>Pollutant</u>	<u>Current License (TPY)</u>	<u>Future License (TPY)</u>	<u>Net Change (TPY)</u>	<u>Significant Emission Levels</u>
PM	15.8	12.9	-2.9	100
PM <sub>10</sub>	15.8	12.9	-2.9	100
SO <sub>2</sub>	79.1	79.1	---	100
NO <sub>x</sub>	48.0	35.3	-12.7	100
CO	16.4	11.7	-4.7	100
VOC	2.2	1.0	-1.2	50
CO <sub>2e</sub>	<100,000	<100,000	---	100,000

The application for MGMC to replace Boiler #3 with Boiler #5 is determined to be a minor modification; therefore, this application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 C.M.R. ch. 115.

E. Facility Classification

With the annual heat input limit on the boilers and non-emergency operating hours restriction on the generators, the facility is licensed as follows:

- As a synthetic minor source of air emissions, because the licensed emissions are below the major source thresholds for criteria pollutants; 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.

### B. Boiler #5

MGMC plans to operate Boiler #5 for steam, heat, and hot water at their facility. Boiler #5 is rated at 8.4 MMBtu/hr and is capable of firing natural gas and distillate fuel. Boiler #5 was manufactured in 2018, will be installed at the facility in summer 2018, and will exhaust through a shared stack with Boilers #1 and #4, Stack #1.

#### 1. BACT Findings

##### a. Particulate Matter (PM and PM<sub>10</sub>)

Particulate matter emissions from fuel combustion are formed from incomplete combustion of fuel and non-combustible material in the fuel. Emissions of particulate matter from new natural gas-fired boilers are generally very low. Given the size of the unit and the minimal particulate matter emissions from the burning of natural gas, add-on emission control equipment for control of particulate matter from Boiler #5 when firing natural gas is not economically feasible.

During periods of gas curtailment, supply interruption, or for periodic testing/maintenance, Boiler #5 will fire distillate fuel. Given the size of the unit and the intermittent nature of distillate fuel firing in the unit, add-on emission control equipment for control of particulate matter from Boiler #5 when firing distillate fuel is not economically feasible.

The Department finds firing natural gas as the primary fuel, use of efficient burner combustion technology, and emission limits of 0.05 lb/MMBtu and 0.4 lb/hr when firing natural gas and 0.08 lb/MMBtu and 0.7 lb/hr when firing distillate fuel to be BACT for PM and PM<sub>10</sub> emissions from Boiler #5.

b. Sulfur Dioxide (SO<sub>2</sub>)

Sulfur dioxide is formed from the combustion of sulfur present in the fuel. Potential control options for sulfur dioxide emissions include the use of fuel with a low sulfur content, sorbent injection, and SO<sub>2</sub> scrubbing technologies such as flue gas desulfurization and packed-bed scrubbers.

Emissions of sulfur dioxide from new natural gas-fired boilers are very low due to the low sulfur content of natural gas. Given the low level of sulfur dioxide emissions from the firing of natural gas, add-on emission control equipment for control of sulfur dioxide from Boiler #5 when firing natural gas is not economically feasible.

During periods of gas curtailment, supply interruption, or for periodic testing/maintenance, Boiler #5 will fire distillate fuel. Given the intermittent nature of distillate fuel firing in the unit and the size of the unit, the use of add-on emission control equipment for the control of SO<sub>2</sub> emissions from Boiler #5 when firing distillate fuel is not economically feasible. The use of a low sulfur fuel such as ultra-low sulfur distillate fuel, which has a sulfur content of less than 0.0015% by weight (15 ppm), is economically feasible.

The Department finds firing natural gas as the primary fuel, the use of distillate fuel with a maximum sulfur content not to exceed 0.0015% by weight (15 ppm) when natural gas is curtailed or its supply is interrupted and for periodic maintenance/testing, and an emission limit of 0.1 lb/hr when firing either natural gas or distillate fuel to be BACT for SO<sub>2</sub> emissions from Boiler #5.

c. Nitrogen Oxides (NO<sub>x</sub>)

Nitrogen oxides mainly consist of nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>). NO<sub>x</sub> from fuel combustion are generated through one of three mechanisms: fuel NO<sub>x</sub>, thermal NO<sub>x</sub>, and prompt NO<sub>x</sub>. Fuel NO<sub>x</sub> is produced by the oxidation of nitrogen in the fuel source, with low nitrogen content fuels such as distillate fuel and natural gas producing less NO<sub>x</sub> than fuels with higher levels of fuel-bound nitrogen. Thermal NO<sub>x</sub> forms in the high temperature area of the combustor and increases exponentially with increases in flame temperature and linearly with increases in residence time. Prompt NO<sub>x</sub> forms from the oxidation of hydrocarbon radicals near the combustion flame; this produces an insignificant amount of NO<sub>x</sub>.

Control of NO<sub>x</sub> emissions can be accomplished using one of three methods: the use of add-on controls, such as selective catalytic reduction (SCR) and selective non-catalytic reduction (SNCR), the use of combustion control techniques, such as low NO<sub>x</sub> burners, flue gas recirculation (FGR), and good combustion practices, and the combustion of clean fuel, such as natural gas and distillate fuel.

Given the size of the unit and the low potential annual NO<sub>x</sub> emissions from the unit, the use of add-on controls such as SCR and SNCR are not economically feasible when firing either natural gas or distillate fuel.

Combustion control methods available to control NO<sub>x</sub> from small industrial and commercial boilers include low NO<sub>x</sub> burners, FGR, and good combustion practices. ‘Low NO<sub>x</sub> burners’ refers to burner components (burner register, atomizing nozzle, diffuser) that are designed to achieve lower NO<sub>x</sub> by mixing the fuel and combustion air in a way that limits NO<sub>x</sub> formation. This is generally done by mixing the combustion air and fuel in multiple stages and by utilizing a specially designed nozzle and/or diffuser to achieve a particular flame pattern. The use of low NO<sub>x</sub> burners is technically and economically feasible for firing natural gas and distillate fuel in Boiler #5.

In FGR systems, a portion of the combustion gases are recirculated back into the combustion zone. This process lowers peak flame temperatures, and therefore thermal NO<sub>x</sub> formation, by allowing the relatively cool flue gas to absorb heat released by the burner flame. Although considered technically feasible, the use of FGR is not economically feasible for a small boiler such as Boiler #5 due to the moderately high capital costs due to the ductwork needed to span from the burner outlet to the combustion air duct, the operating costs associated with the energy requirements of recirculation fans, and marginal emission reduction benefit. Additionally, FGR systems can affect heat transfer and system pressures.

Good combustion practices include operating the system based on the design and recommendations provided by the manufacturer and by maintaining proper air-to-fuel ratios with periodic maintenance checks.

The Department finds the use of natural gas as the primary fuel, the use of distillate fuel when the natural gas supply is curtailed or interrupted or for period maintenance/testing, the use of low NO<sub>x</sub> burners, the use of good combustion practices, and emission limits of 0.4 lb/hr when firing natural gas and 1.2 lb/hr when firing distillate fuel to be BACT for NO<sub>x</sub> emissions from Boiler #5.

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

Carbon monoxide and volatile organic compounds emissions are a result of incomplete combustion, caused by conditions such as insufficient residence time or limited oxygen availability. Potential control options for CO and VOC emissions include combustion controls and the use of a catalyst system.

Emissions of CO and VOC from new natural gas-fired boilers are generally low. Given the size of the unit and the low potential CO and VOC emissions, the use of add-on emission control equipment for the control of CO and VOC emissions from Boiler #5 when firing natural gas are not considered economically feasible. Instead, MGMC has proposed the use of efficient burner combustion technology.

During periods of gas curtailment, supply interruption, or for periodic maintenance/testing, Boiler #5 will fire distillate fuel. Given the intermittent nature of distillate fuel firing in the unit and the size of the unit, the use of add-on emission control equipment for the control of CO and VOC emissions from Boiler #5 when firing distillate fuel is not economically feasible. Instead, MGMC has proposed the use of efficient burner combustion technology.

The Department finds the use of natural gas as the primary fuel, the use of distillate fuel when the natural gas supply is curtailed or interrupted or for period maintenance/testing, the use of efficient burner combustion technology, and the following emission limits to be BACT for CO and VOC emissions from Boiler #5:

<b>Pollutant</b>	<b>Fuel</b>	<b>lb/hr</b>
CO	Natural gas	0.7
	Distillate fuel	0.3
VOC	Natural gas	0.1
	Distillate fuel	0.1

e. Visible Emissions

When Boiler #4 is firing #6 fuel oil and/or when Boilers #1, #4, and/or #5 are firing distillate fuel, visible emissions from Stack #1 shall not exceed 20% opacity on a six-minute block average basis.

When Boilers #1, #4, and/or #5 are firing natural gas and/or when Boilers #1 and/or #4 are firing propane and none of the three boilers are firing either #6 fuel oil or distillate fuel, visible emissions from Stack #1 shall not exceed 10% opacity on a six-minute block average basis.

f. Heat Input Restriction

Boiler #5 shall be included in the Boilers #1 and #4 distillate fuel/#6 fuel oil heat input limit of 75,000 MMBtu/year, based on a 12-month rolling total. MGMC shall maintain records of distillate fuel use in Boiler #5 to demonstrate compliance with this limit.

2. Emission Limits

The BACT emission limits for Boiler #5 when firing natural gas were based on the following:

- PM/PM<sub>10</sub> – 0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
- SO<sub>2</sub> – 0.6 lb/MMscf based on AP-42, Table 1.4-2, dated 7/98
- NO<sub>x</sub> – 50 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 C.M.R. ch. 115, BACT

The BACT emission limits for Boiler #5 when firing distillate fuel were based on the following:

- PM/PM<sub>10</sub> – 0.08 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
- SO<sub>2</sub> – based on firing distillate fuel with a maximum sulfur content of 0.0015% by weight
- NO<sub>x</sub> – 20 lb/1000 gal based on AP-42, Table 1.3-1, dated 5/10
- CO – 5 lb/1000 gal based on AP-42, Table 1.3-1, dated 5/10
- VOC – 0.34 lb/1000 gal based on AP-42, Table 1.3-3, dated 5/10
- Visible Emissions – 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Boiler #5 are the following:

Unit	Fuel	Pollutant	lb/MMBtu
Boiler #5	Natural gas	PM	0.05
	Distillate fuel	PM	0.08

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #5 Natural gas	0.4	0.4	0.1	0.4	0.7	0.1
Boiler #5 Distillate fuel	0.7	0.7	0.1	1.2	0.3	0.1

When Boiler #4 is firing #6 fuel oil and/or when Boilers #1, #4, and/or #5 are firing distillate fuel, visible emissions from Stack #1 shall not exceed 20% opacity on a six-minute block average basis.

When Boilers #1, #4, and/or #5 are firing natural gas and/or when Boilers #1 and/or #4 are firing propane and none of the three boilers are firing either #6 fuel oil or distillate fuel, visible emissions from Stack #1 shall not exceed 10% opacity on a six-minute block average basis.

Boiler #5 shall be included in the Boilers #1 and #4 heat input limit of 75,000 MMBtu/year for distillate fuel and #6 fuel oil. There is no restriction on the firing of natural gas in Boiler #5.

The distillate fuel fired in Boiler #5 shall not exceed a sulfur content of 0.0015% by weight (15 ppm). Compliance with this limit shall be demonstrated by fuel records from the supplier indicating the sulfur content of the fuel.

3. Periodic Monitoring

Periodic monitoring for Boiler #5 shall include recordkeeping to document fuel use both on a monthly and 12-month rolling total basis. Documentation shall include the type of fuel used and sulfur content of the fuel, if applicable.

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

Due to the size of the unit, Boiler #5 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]

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

Boiler #5 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 JJJJJ. The unit is considered a new gas-fired boiler rated less than 10 MMBtu/hr. [40 C.F.R. §§63.11193 and 63.11195]

Gas-fired boilers are exempt from 40 C.F.R. Part 63, Subpart JJJJJ. 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]



If Boiler #5 fails to meet the definition of gas-fired boiler in the future, MGMC shall notify EPA and the Department of the fuel change within 30 days of the change as required by 40 C.F.R. § 63.11225(g), and the boiler shall become subject to 40 C.F.R. Part 63, Subpart JJJJJ as a new oil-fired boiler. [40 C.F.R. § 63.11225(g) and 06-096 C.M.R. ch. 115, BPT]

C. Emissions Statement

The following language is being included to clarify the recordkeeping requirements of 06-096 C.M.R. ch. 137:

MGMC is subject to emissions inventory requirements contained in *Emission Statements*, 06-096 C.M.R. ch. 137. MGMC shall maintain the following records in order to comply with this rule:

1. The amount of distillate fuel and/or #6 fuel oil fired in Boilers #1, #4, and #5 (each) on a monthly basis;
2. The amount of natural gas and/or propane fired in Boilers #1, #4, and #5 (each) on a monthly basis;
3. The amount of distillate fuel fired in the emergency generators (each) on a monthly basis;
4. The sulfur content of the distillate fuel and/or #6 fuel oil fired in the boilers and the distillate fuel fired in the emergency generators; and
5. Hours of operation for each emission unit on an annual basis.

In reporting year 2020 and every third year thereafter, MGMC shall report to the Department emissions of hazardous air pollutants as required by 06-096 C.M.R. ch. 137, § (3)(C). The Department will use these reports to calculate and invoice for the applicable annual air quality surcharge for the subsequent three billing periods. MGMC shall pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3). [38 M.R.S. § 353-A(1-A)]

D. Annual Emissions

1. Total Annual Emissions

MGMC shall be restricted to the following annual emissions, based on a 12-month rolling total. The tons per year limits were calculated based on a heat input limit of 75,000 MMBtu/year for Boilers #1, #4, and #5 when firing distillate fuel and/or #6 fuel oil, unlimited firing of natural gas and/or propane in Boilers #1, #4, and #5, and 100 hours/year of operation each for Emergency Generators #3 and #4:

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

	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>VOC</b>
Boilers #1, #4, and #5 (Firing oil)	7.5	7.5	78.8	18.8	1.3	0.1
Boilers #1, #4, and #5 (Firing natural gas/propane)	5.1	5.1	0.1	10.1	8.5	0.6
Emergency Generator #3	0.2	0.2	0.1	4.4	0.8	0.2
Emergency Generator #4	0.1	0.1	0.1	2.0	1.1	0.1
<b>Total TPY</b>	<b>12.9</b>	<b>12.9</b>	<b>79.1</b>	<b>35.3</b>	<b>11.7</b>	<b>1.0</b>

<b>Pollutant</b>	<b>Tons/year</b>
Single HAP	9.9
Total HAP	24.9

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 C.F.R. Part 52, Subpart A, § 52.21, *Prevention of Significant Deterioration of Air Quality* rule. Greenhouse gases, as defined in 06-096 C.M.R. ch. 100, are the aggregate group of the following gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. For licensing purposes, greenhouse gases (GHG) are calculated and reported as carbon dioxide equivalents (CO<sub>2</sub>e).

The quantity of CO<sub>2</sub>e emissions from this facility is less than 100,000 tons per year, based on the following:

- the facility's heat input limits and operating hours restrictions;
- worst case emission factors from the following sources: U.S. EPA's AP-42, the Intergovernmental Panel on Climate Change (IPCC), and *Mandatory Greenhouse Gas Reporting*, 40 C.F.R. Part 98; and
- global warming potentials contained in 40 C.F.R. Part 98.

No additional licensing actions to address GHG emissions are required at this time.

### III. AMBIENT AIR QUALITY ANALYSIS

MGMC previously submitted an ambient air quality impact analysis for Air Emission License A-438-73-B-R (dated December 9, 1996) demonstrating that emissions from the facility, in conjunction with all other sources, do not violate Ambient Air Quality Standards (AAQS). Since the maximum short-term emission limits are not changing, an additional air quality impact analysis is not required for this amendment.

### ORDER

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

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

The Department hereby grants Air Emission License Amendment A-438-71-M-A subject to the conditions found in Air Emission License A-438-71-J-R/A, in amendments A-438-71-K-A and A-438-71-L-M, and the following conditions.

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

## **SPECIFIC CONDITIONS**

**The following shall replace Condition (16) of Air Emission License Amendment A-438-71-L-M (February 20, 2018):**

**(16) Boilers #1, #4, and #5**

A. MGMC is licensed to install and operate Boiler #5. [06-096 C.M.R. ch. 115, BACT]

B. Fuels

1. Boilers #1, #4, and #5 are licensed to fire distillate fuel, while only Boiler #4 is licensed to fire #6 fuel oil. Distillate fuel and #6 fuel oil use combined shall not exceed the equivalent of 75,000 MMBtu/year on a 12-month rolling total basis. To demonstrate compliance, MGMC shall keep records on a monthly and 12-month rolling total basis documenting the total heat input (in MMBtu) based upon monthly fuel use. [06-096 C.M.R. ch. 115, BPT]

a. Distillate Fuel Sulfur Content

- (1) MGMC shall fire distillate fuel with a maximum sulfur content not to exceed 0.0015% by weight (15 ppm) in Boiler #5. [06-096 C.M.R. ch. 115, BACT]
- (2) Prior to July 1, 2018, the facility shall fire distillate fuel with a maximum sulfur content not to exceed 0.5% by weight in Boilers #1 and #4. [06-096 C.M.R. ch. 115, BPT]
- (3) Beginning July 1, 2018, the facility shall not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm) for use in Boilers #1 and #4. [06-096 C.M.R. ch. 115, BPT]
- (4) Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and the percent sulfur of the fuel delivered. [06-096 C.M.R. ch. 115, BPT]

b. #6 Fuel Oil Sulfur Content

- (1) Prior to July 1, 2018, the facility shall fire #6 fuel oil with a maximum sulfur content not to exceed 2.0% by weight in Boiler #4. [06-096 C.M.R. ch. 115, BPT]
- (2) Beginning July 1, 2018, the facility shall not purchase or otherwise obtain #6 fuel oil with a maximum sulfur content that exceeds 0.5% by weight for use in Boiler #4. [06-096 C.M.R. ch. 115, BPT]
- (3) Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and the percent sulfur of the fuel delivered. [06-096 C.M.R. ch. 115, BPT]

2. Boilers #1 and #4 are licensed to fire natural gas and propane with no annual fuel use limits, and Boiler #5 is licensed to fire natural gas with no annual fuel use limit. Records of natural gas and propane use shall be maintained on a monthly and 12-month rolling total basis. [06-096 C.M.R. ch. 115, BACT]

C. Emissions shall not exceed the following:

Unit	Fuel	Pollutant	lb/MMBtu	Origin and Authority
Boilers #1 and #4 [each]	Natural gas/ Propane	PM	0.05	06-096 C.M.R. ch. 115, BACT/BPT
Boiler #5	Natural gas	PM	0.05	06-096 C.M.R. ch. 115, BACT
Boilers #1, #4, and #5 [each]	Distillate fuel	PM	0.08	06-096 C.M.R. ch. 115, BPT and 06-096 C.M.R. ch. 115, BACT
Boiler #4	#6 fuel oil	PM	0.20	06-096 C.M.R. ch. 103, § 2.A.(1)

D. When firing natural gas, emissions shall not exceed the following [06-096 C.M.R. ch. 115, BACT/BPT]:

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	0.3	0.3	0.1	0.6	0.5	0.1
Boiler #4	0.4	0.4	0.1	0.8	0.7	0.1
Boiler #5	0.4	0.4	0.1	0.4	0.7	0.1

E. When firing propane, emissions shall not exceed the following [06-096 C.M.R. ch. 115, BACT]:

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	0.3	0.3	0.1	0.9	0.5	0.1
Boiler #4	0.4	0.4	0.1	1.2	0.7	0.1

F. When firing distillate fuel, emissions shall not exceed the following [06-096 C.M.R. ch. 115, BPT and 06-096 C.M.R. ch.115, BACT/BPT]:

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	0.5	0.5	3.1	1.9	0.2	0.1
Boiler #4	0.7	0.7	4.2	2.5	0.3	0.1
Boiler #5	0.7	0.7	0.1	1.2	0.3	0.1

- G. When firing #6 fuel oil, emissions shall not exceed the following [06-096 C.M.R. ch. 115, BPT]:

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #4	1.7	1.7	17.7	4.2	0.3	0.1

H. Visible Emissions

1. When Boiler #4 is firing #6 fuel oil and/or when Boilers #1, #4, and/or #5 are firing distillate fuel, visible emissions from Stack #1 shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT/BPT]
  2. When Boilers #1, #4, and/or #5 are firing natural gas and/or when Boilers #1 and/or #4 are firing propane and none of the three boilers are firing either #6 fuel oil or distillate fuel, visible emissions from Stack #1 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT/BPT]
- I. If Boilers #1, #4, and/or #5 fail to meet the definition of gas-fired boiler in the future, MGMC shall notify EPA and the Department of the fuel change within 30 days of the change as required by 40 C.F.R. § 63.11225(g), and the boilers shall become subject to 40 C.F.R. Part 63, Subpart JJJJJ as existing oil-fired boilers (Boilers #1 and #4) or as a new oil-fired boiler (Boiler #5). [40 C.F.R. § 63.11225(g) and 06-096 C.M.R. ch. 115, BPT]

The following shall replace Condition (18) of Air Emission License A-438-71-J-R/A (November 5, 2012):

(18) **Annual Emission Statement**

- A. In accordance with *Emission Statements*, 06-096 C.M.R. ch. 137, MGMC shall annually report to the Department, in a format prescribed by the Department, the information necessary to accurately update the State's emission inventory. The emission statement shall be submitted as specified by the date in 06-096 C.M.R. ch. 137.

B. MGMC shall keep the following records in order to comply with 06-096 C.M.R. ch. 137:

1. The amount of distillate fuel and/or #6 fuel oil fired in Boilers #1, #4, and #5 (each) on a monthly basis;
2. The amount of natural gas and/or propane fired in Boilers #1, #4, and #5 (each) on a monthly basis;
3. The amount of distillate fuel fired in the emergency generators (each) on a monthly basis;
4. The sulfur content of the distillate fuel and/or #6 fuel oil fired in the boilers and the distillate fuel fired in the emergency generators; and
5. Hours of operation for each emission unit on an annual basis.

[06-096 C.M.R. ch. 137]

C. In reporting year 2020 and every third year thereafter, MGMC shall report to the Department emissions of hazardous air pollutants as required by 06-096 C.M.R. ch. 137, § (3)(C). MGMC shall pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3). [38 M.R.S. § 353-A(1-A)]

DONE AND DATED IN AUGUSTA, MAINE THIS 9 DAY OF July, 2018.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Conner for  
PAUL MERCER, COMMISSIONER

**The term of this amendment shall be concurrent with the term of Air Emission License A-438-71-J-R/A.**

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: May 17, 2018

Date of application acceptance: May 21, 2018

Date filed with the Board of Environmental Protection:

This Order prepared by Jonathan E. Rice, Bureau of Air Quality.

