



DEPARTMENT ORDER

**Maine Army National Guard  
Penobscot County  
Bangor, Maine  
A-755-71-L-M**

**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

Maine Army National Guard (MEARNG) was issued Air Emission License A-755-71-I-R/A on July 18, 2014, for the operation of emission sources associated with their facilities, which include several maintenance buildings; ground vehicle and rotary wing aircraft staging; service and repair; armory buildings; and a Reserve Center – all located at and in the vicinity of the Bangor International Airport. The license was subsequently amended on March 3, 2017 (A-755-71-J-A), and on January 3, 2018 (A-755-71-K-A).

MEARNG has requested an amendment to their license to add boilers AFRC-3 and AFRC-4 to their inventory of significant equipment at their facility. These two boilers were listed in the previous amendment A-755-71-K-A as insignificant due to their size, but when the project was executed, larger boilers were actually procured and installed. Their larger sizes make them subject to licensing, based on their maximum heat input values.

MEARNG has also provided additional detail about the painting activities that are performed at their facility, and requested that this information be included in the air license and used to establish the applicability of State of Maine rules to these activities.

The two boilers addressed in this license amendment are located at the Armed Forces Reserve Center (AFRC) at 300 Hildreth Street N in Bangor, Maine while the painting activities addressed in this amendment are performed at the Army Aviation Support Facility (AASF) on 92 Hayes Street, and at the Field Maintenance Shop (FMS) on 28 Hayes Street, also in Bangor, Maine.

B. Emission Equipment

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

**Boilers**

<b>Boiler</b>	<b>Max. Capacity (MMBtu/hr)</b>	<b>Maximum Firing Rate</b>	<b>Fuel Type</b>	<b>Date of Manuf.</b>	<b>Date of Install.</b>	<b>Stack #</b>
AFRC-3	1.0	980 scfh	Natural Gas	2017	2018	AFRC-D
AFRC-4	1.0	980 scfh	Natural Gas	2017	2018	AFRC-E

C. Other Emissions Activities

MEARNG uses paints and cleaners at this facility to perform touch-up repairs on military vehicles and to apply identification stenciling to their bumpers. MEARNG also applies paint to structure walls and miscellaneous equipment as a part of their facility upkeep.

MEARNG uses an aggregate total of less than 50 gallons of coatings per 12 month rolling period at this facility, as tracked through purchase records kept by their supply offices. Based on this usage, the painting operations at MEARNG are exempt from the requirements of 06-096 C.M.R. ch. 129, *Surface Coating Facilities*. [06-096 C.M.R. ch. 129, (1)(E)(1)]

The touch-up painting and stenciling activities performed on the military vehicles at MEARNG are not subject to the requirements of 06-096 C.M.R. ch. 153, *Mobile Equipment Repair and Refinishing*. [06-096 C.M.R. ch. 153,(3)(E)(1 and 3)]

The facility upkeep activities performed at MEARNG are categorically exempt from the requirements of 06-096 C.M.R. ch. 115, *Major and Minor Source Air Emission License Regulation*. [06-096 C.M.R. ch. 115, Appendix B, (A)(12)]

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.

This amendment will not result in an increase of emissions for MEARNG because the boilers that are being added to the license by this amendment have emission factors that are equal to or lower than the emission factors of the boilers that are already licensed. MEARNG's current license has a facility-wide heat input restriction for their boilers that will apply to these boilers as well. Therefore, this modification is determined to be a minor revision and has been processed as such.

E. Facility Classification

With the annual fuel limit on the boilers and the operating hours restriction on the emergency generators and fire pump engines, 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. Boilers AFRC-3 and AFRC-4

MEARNG operates Boilers AFRC-3 and AFRC-4 for heating purposes. The boilers are rated at 1.0 MMBtu/hr each and both fire natural gas. The boilers were both installed in 2018, and each exhausts through its own stack.

1. BACT Findings for Boilers AFRC-3 and AFRC-4

The two boilers have the potential to emit the following criteria air pollutants: particulate matter (PM/PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), nitrous oxides (NO<sub>x</sub>), carbon monoxide (CO) and volatile organic compounds (VOC). Because natural gas is an inherently clean fuel, and due to the size of the two boilers, additional add-on pollution control technology is not economically feasible. The Department finds that MEARNG's proposal of good combustion practices and the exclusive firing of natural gas in these two boilers shall constitute BACT.

## 2. BACT Findings

The BACT emission limits for the boilers were based on the following:

### Natural Gas

- PM/PM<sub>10</sub> – 0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
- 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 the two boilers are the following:

<b>Boiler</b>	<b>PM (lb/hr)</b>	<b>PM<sub>10</sub> (lb/hr)</b>	<b>SO<sub>2</sub> (lb/hr)</b>	<b>NO<sub>x</sub> (lb/hr)</b>	<b>CO (lb/hr)</b>	<b>VOC (lb/hr)</b>
AFRC-3 Natural Gas	0.05	0.05	negl.	0.05	0.08	0.01
AFRC-4 Natural Gas	0.05	0.05	negl.	0.05	0.08	0.01

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

## 3. Periodic Monitoring

Periodic monitoring for the boilers shall include recordkeeping to demonstrate compliance with the facility-wide heat input restriction contained in Specific Condition (19) of air emission license A-755-71-I-R/A dated July 18, 2014. Documentation shall include the type and quantity of fuel used.

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

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

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

Gas-fired boilers are exempt from 40 C.F.R. Part 63, Subpart JJJJJ. Boilers AFRC-3 and AFRC-4 each fire natural gas exclusively. Therefore, they are not subject to this subpart. [40 C.F.R. § 63.11195]

C. Annual Emissions

This amendment does not affect MEARNG's licensed annual emissions because the boilers that are being added to the license by this amendment have emission factors that are equal to or lower than the emission factors of the boilers that are already licensed, and MEARNG has a facility-wide heat input restriction for their boilers.

**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-755-71-L-M subject to the conditions found in Air Emission License A-755-71-I-R/A, in amendments A-755-71-J-A and A-755-71-K-A, and the following conditions.

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

**SPECIFIC CONDITIONS**

The following new Specific Condition (24) is being added to the existing air license A-755-71-I-R/A, dated July 18, 2014.

**(24) Boilers AFRC-3 and AFRC-4**

**A. Fuel**

1. Boilers AFRC-3 and AFRC-4 shall fire natural gas exclusively. [06-096 C.M.R. ch. 115, BACT]
2. Boilers AFRC-3 and AFRC-4 shall be subject to the facility-wide heat input limit established in Specific Condition (19) of air license A-755-71-I-R/A, dated July 18, 2014.

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

<b>Boiler</b>	<b>PM (lb/hr)</b>	<b>PM<sub>10</sub> (lb/hr)</b>	<b>SO<sub>2</sub> (lb/hr)</b>	<b>NO<sub>x</sub> (lb/hr)</b>	<b>CO (lb/hr)</b>	<b>VOC (lb/hr)</b>
AFRC-3	0.05	0.05	0.01	0.05	0.08	0.01
AFRC-4	0.05	0.05	0.01	0.05	0.08	0.01

**C. Visible emissions from each boiler shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]**

DONE AND DATED IN AUGUSTA, MAINE THIS 8 DAY OF February, 2019.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Corne for  
GERALD D. REID, COMMISSIONER

**The term of this amendment shall be concurrent with the term of Air Emission License A-755-71-I-R/A.**

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 11/29/2018  
Date of application acceptance: 11/29/2018

Date filed with the Board of Environmental Protection:

This Order prepared by Patric J. Sherman, Bureau of Air Quality.

