



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE
GOVERNOR

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ACTING COMMISSIONER

**City of Augusta
Kennebec County
Augusta, Maine
A-899-71-C-M**

**Departmental
Findings of Fact and Order
Air Emission License
Amendment #1**

FINDINGS OF FACT

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

I. REGISTRATION

A. Introduction

The City of Augusta was issued Air Emission License A-899-71-B-N/A on May 3, 2013 permitting the operation of emission sources associated with the Capitol Area Technical Center and Cony High School. (Hereafter, the City of Augusta will be referred to as CATC/CHS.)

CATC/CHS has requested a minor revision to their license in order to address the following changes:

1. Remove oil-fired Boilers #3 and #4;
2. Add three new natural gas-fired boilers, Boilers #1, #2, and #3; and
3. Add two paint booths.

The equipment addressed in this license is located at 40 Pierce Drive, Augusta, Maine.

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 760-3143

B. Emission Equipment

The following equipment is addressed in this air emission license:

Boilers

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (scf/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Date of Manuf.</u>
Boiler #1	2.2	2,135	natural gas, negligible	2014
Boiler #2	2.2	2,135	natural gas, negligible	2014
Boiler #3	2.2	2,135	natural gas, negligible	2014

CATC/CHS also operates two paint booths associated with the facility's maintenance activities.

C. Application Classification

This amendment will increase emissions by less than 4 ton/year for each single pollutant not including greenhouse gases (GHG) and less than 8 ton/year for all pollutants combined not including GHG. Therefore, this modification is determined to be a minor revision 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.

B. Boilers #1, #2, and #3

CATC/CHS has removed the previously licensed Boilers #3 and #4 and replaced them with three new natural gas-fired boilers, Boiler #1, #2, and #3. The new boilers are each rated at 2.2 MMBtu/hr and installed in 2014.

1. BACT Findings

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

- PM/PM₁₀ – 0.05 lb/MMBtu based on 06-096 CMR 115, BPT
- SO₂ – 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
- Opacity – 06-096 CMR 101

The BACT emission limits for the boilers 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)
Boiler #1	0.11	0.11	neg	0.21	0.18	0.01
Boiler #2	0.11	0.11	neg	0.21	0.18	0.01
Boiler #3	0.11	0.11	neg	0.21	0.18	0.01

Visible emissions from the boilers shall each not exceed 10% opacity on a 6-minute block average, except for no more than one (1) six (6) minute block average in a 3-hour period.

2. 40 CFR Part 60, Subpart Dc

Due to their size, Boilers #1, #2, and #3 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 JJJJJ

Natural gas-fired boilers are exempt from *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* (40 CFR Part 63 Subpart JJJJJ).

C. Paint Booths

CATC/CHS operates two Paint Booths primarily to touch up or repaint city equipment and as part of the school's curriculum. The spray booths are equipped with filters for control of emissions of particulate matter. Emissions of PM from the spray booths are considered unquantifiable. However, CATC/CHS shall maintain the filters so as to minimize PM emissions.

BACT for the painting and finishing operations is determined to be use and maintenance of the particulate filters and maintaining records demonstrating compliance with a VOC limit of 2.0 tpy and a Total HAP limit of 0.6 tpy.

Visible emissions from the paint booth exhausts shall not exceed an opacity of 20% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period.

D. Annual Emissions

1. Total Annual Emissions

CATC/CHS shall be restricted to the following annual emissions, based on a calendar year. The tons per year limits were calculated based on the following:

- Unlimited firing of natural gas in the boilers;
- 500 hr/year operation of Generator #1;
- VOC & HAP limits for the paint booths.

Total Licensed Annual Emissions for the Facility

Tons/year

(used to calculate the annual license fee)

	PM	PM ₁₀	SO ₂	NO _x	CO	VOC	Total HAP
Boiler #1	0.5	0.5	–	0.2	0.8	0.1	–
Boiler #2	0.5	0.5	–	0.2	0.8	0.1	–
Boiler #3	0.5	0.5	–	0.2	0.8	0.1	–
Generator #1	0.1	0.1	–	3.8	1.0	0.1	–
Paint Booths	–	–	–	–	–	2.0	0.6
Total TPY	1.6	1.6	–	4.4	3.4	2.4	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 (CO₂e).

The quantity of CO₂e emissions from this facility is less than 100,000 tons per year, based on the following:

- the facility's fuel use limits;
- 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:

<u>Pollutant</u>	<u>Tons/Year</u>
PM ₁₀	25
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.

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-899-71-C-M subject to the conditions found in Air Emission License A-899-71-B-N/A and 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.

Condition (16) of Air Emission License A-899-71-B-N/A is Deleted.

The following are New Conditions:

(21) Boilers #1, #2, and #3

- A. Boilers #1, #2, and #3 are licensed to fire natural gas. [06-096 CMR 115, BACT]
- B. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

Emission Unit	PM (lb/hr)	PM₁₀ (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	0.11	0.11	neg	0.21	0.18	0.01
Boiler #2	0.11	0.11	neg	0.21	0.18	0.01
Boiler #3	0.11	0.11	neg	0.21	0.18	0.01

- C. Visible emissions from Boilers #1, #2, and #3 shall each not exceed 10% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a continuous 3-hour period. [06-096 CMR 101]

(22) Paint Booths

- A. CATC/CHS shall maintain the Paint Booths and associated filters in good working order and any coating material spilled or excess coating material shall be cleaned up immediately. [06-096 CMR 115, BACT]
- B. Visible emissions from the Paint Booth exhausts shall not exceed an opacity of 20% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. [06-096 CMR 101]
- C. CATC/CHS shall not exceed total annual emissions of 2.0 tons per year of VOCs from the Paint Booths or 0.6 tons per year of any combination of HAPs based on a calendar year. [06-096 CMR 115, BACT]

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- D. To demonstrate compliance with VOC and HAP emissions limits, CATC/CHS shall maintain records of all VOC/HAP containing materials used in the Paint Booths. The records shall include type of materials used, volume of materials used, and VOC and HAP content based on Safety Data Sheets (SDS). Records shall be maintained on a calendar year basis. [06-096 CMR 115, BACT]

DONE AND DATED IN AUGUSTA, MAINE THIS 23 DAY OF September, 2015.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Come
AVERY T. DAY, ACTING COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-899-71-B-N/A.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 8/10/15

Date of application acceptance: 8/10/15

Date filed with the Board of Environmental Protection:

This Order prepared by Lynn Muzzey, Bureau of Air Quality.

