

**Eastern Maine Technical College
Penobscot County
Bangor, Maine
A-396-71-D-N**

**Departmental
Findings of Fact and Order
Air Emission License
After-the-Fact**

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Eastern Maine Technical College (EMTC) of Bangor, Maine has applied to renew their Air Emission License permitting the operation of emission sources associated with their educational facility.

B. Emission Equipment

EMTC is licensed to operate the following equipment:

Fuel Burning Equipment

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Installation Date</u>
Boiler #1	5.2	35.6	#4 fuel oil, 1.0%*	1967
Boiler #2	5.2	35.6	#4 fuel oil, 1.0%*	1967
Boiler B1**	2.8	19.8	#2 fuel oil, 0.35%	1999
Boiler B2**	2.8	19.8	#2 fuel oil, 0.35%	1999
Boiler #4	2.3	16.5	#2 fuel oil, 0.35%	1981
Boiler #5	1.4	9.4	#2 fuel oil, 0.35%	1980
Boiler #6	2.2	15.8	#2 fuel oil, 0.35%	1988
Boiler #7	1.7	12.0	#2 fuel oil, 0.35%	1981
Boiler #8	2.8	20.0	#2 fuel oil, 0.35%	1971

* - After the current fixed price fuel oil contract for the 2000/2001 season expires, the sulfur limit for the #4 fuel oil will be 0.5%.

** - Denotes new equipment.

C. Application Classification

The last license for EMTC has lapsed, thus, this application is treated as a new source.

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 Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Air Regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Boilers #1 and #2

Boilers #1 and #2 have previously been licensed to fire #4 fuel oil with a sulfur content not to exceed 1.0%. BACT for these boilers includes the firing of #4 fuel oil with a sulfur content not to exceed 0.5%. EMTC will be allowed to run out their current fuel oil contract for this season firing #4 with a maximum sulfur limit of 1.0%. After this contract expires, EMTC will be required to meet a sulfur limit of 0.5% for their #4 fuel oil.

These boilers were installed prior to 1981 and are therefore not subject to the New Source Performance Standards (NSPS) Subpart Dc for steam generating units greater than 10 MMBtu/hr manufactured after June 9, 1989.

A summary of the BACT analysis for Boilers #1 and #2 (5.2 MMBtu/hr each) is the following:

1. For the 2000/2001 heating season, the total #4 fuel oil use for the facility shall not exceed 100,000 gal/year based on a 12 month rolling total with a maximum sulfur content not to exceed 1.0% by weight.
2. After expiration of the current fuel oil contract, the total #4 fuel oil use for the facility shall not exceed 100,000 gal/year based on a 12 month rolling total with a maximum sulfur content not to exceed 0.5% by weight.
3. Chapter 106 regulates fuel sulfur content, however in this case a BACT analysis for SO₂ determined a more stringent limit of 0.5% was appropriate and shall be used.
4. Chapter 103 regulates PM emission limits for Boilers #1 and #2. The PM limits for Boiler #5 and the PM₁₀ limits are derived from the PM limits.
5. NO_x emission limits are based on data from similar #4 fired boilers of this size and age.
6. CO and VOC emission limits are based upon AP-42 data dated 9/98.

7. Visible emissions from the boilers shall not exceed 30% opacity on a 6 minute block average, except for no more than 2 six minute block averages in a continuous 3 hour period.

C. Boilers B1, B2, #4, #5, #6, #7, and #8

Boilers B1, B2, #4, #5, #6, #7, and #8 were previously licensed to fire #2 fuel oil with a sulfur content not to exceed 0.35% by weight. Boilers B1 and B2 were installed in 1999 and have not previously been licensed.

Boilers #4, #5, #6, #7, and #8 were installed prior to 1989 and Boilers B1 and B2 have heat inputs less than 10 MMBtu/hr. These boilers are therefore not subject to the New Source Performance Standards (NSPS) Subpart Dc for steam generating units greater than 10 MMBtu/hr manufactured after June 9, 1989.

A summary of the BACT analysis for Boiler B1 & B2 (2.8 MMBtu/hr each), Boiler #4 (2.3 MMBtu/hr), Boiler #5 (1.4 MMBtu/hr), Boiler #6 (2.2 MMBtu/hr), Boiler #7 (1.7 MMBtu/hr), and Boiler #8 (2.8 MMBtu/hr) is the following:

1. The total #2 fuel oil use for the facility shall not exceed 150,000 gal/year of #2 fuel oil, based on a 12 month rolling total, with a maximum sulfur content not to exceed 0.35% by weight.
2. Chapter 106 regulates fuel sulfur content, however in this case a BACT analysis for SO₂ determined a more stringent limit of 0.35% was appropriate and shall be used.
3. The PM and PM₁₀ limits for Boilers B1, B2, #4, #5, #6, #7, and #8 are derived from Chapter 103.
4. NO_x emission limits are based on data from similar #2 fired boilers of this size and age.
5. CO and VOC emission limits are based upon AP-42 data dated 9/98.
6. Visible emissions from the boilers shall not exceed 20% opacity on a 6 minute block average, except for no more than 2 six minute block averages in a continuous 3 hour period.

D. Annual Emission Restrictions

EMTC shall be restricted to the following annual emissions, based on a 12 month rolling total:

Total Allowable Annual Emission for the Facility
(used to calculate the annual license fee)

<u>Pollutant</u>	<u>Tons/Year</u>
PM	2.2
PM ₁₀	2.2
SO ₂	7.4
NO _x	5.3
CO	0.6
VOC	0.1

III. AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a minor new source shall be determined on a case-by case basis.

Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source.

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,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-369-71-D-N subject to the following 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.
- (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.
 - (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.
 - (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.
 - (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. § 353.
 - (6) The license does not convey any property rights of any sort, or any exclusive privilege.
 - (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.
 - (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.
 - (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.
 - (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.
- (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:
- (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - a. 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
 - b. pursuant to any other requirement of this license to perform stack testing.
 - (ii) 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
 - (iii) submit a written report to the Department within thirty (30) days from date of test completion.
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- (i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - (ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - (iii) 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.

- (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.
- (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 emission 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.
- (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.
- (16) Boilers #1 and #2
- A. Capacity shall not exceed 5.2 MMBtu/hr each for Boilers #1 and #2.
 - B. For the 2000/2001 heating season, the total #4 fuel oil use for the facility shall not exceed 100,000 gal/year based on a 12 month rolling total with a maximum sulfur content not to exceed 1.0% by weight.
 - C. After expiration of the current fuel oil contract, the total #4 fuel oil use for the facility shall not exceed 100,000 gal/year based on a 12 month rolling total with a maximum sulfur content not to exceed 0.5% by weight.
 - D. Fuel records, including gallons used and percent sulfur, shall be maintained on a monthly basis, in addition to the 12 month rolling total.
 - E. Emissions shall not exceed the following:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Boiler #1	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	0.62	0.62	2.60	1.56	0.18	0.01
Boiler #2	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	0.62	0.62	2.60	1.56	0.18	0.01

- F. Visible emissions from Boilers #1 and #2 shall not exceed 30% opacity on a 6 minute block average, except for no more than 2 six minute block averages in a continuous 3 hour period.

- (17) Boilers B1, B2, #4, #5, #6, #7, and #8
- A. Capacity shall not exceed 2.8 MMBtu/hr each for Boilers B1 and B2, 2.3 MMBtu/hr for Boiler #4, 1.4 MMBtu/hr for Boiler #5, 2.2 MMBtu/hr for Boilers #6, 1.7 MMBtu/hr for Boiler #7, and 2.8 MMBtu/hr for Boiler #8.
 - B. The total #2 fuel oil use for the facility shall not exceed 150,000 gal/yr of #2 fuel oil (12 month rolling total) with a maximum sulfur content not to exceed 0.35% by weight. Fuel records, including gallons used and percent sulfur, shall be maintained on a monthly basis, in addition to the 12 month rolling total.
 - C. Emissions shall not exceed the following:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Boiler B1	lb/hr	0.33	0.33	0.97	0.83	0.10	0.01
Boiler B2	lb/hr	0.33	0.33	0.97	0.83	0.10	0.01
Boiler #4	lb/hr	0.28	0.28	0.81	0.69	0.08	0.01
Boiler #5	lb/hr	0.16	0.16	0.48	0.41	0.05	0.01
Boiler #6	lb/hr	0.27	0.27	0.77	0.66	0.08	0.01
Boiler #7	lb/hr	0.20	0.20	0.59	0.50	0.06	0.01
Boiler #8	lb/hr	0.34	0.34	0.98	0.84	0.10	0.01

- D. Visible emissions from Boilers B1, B2, #4, #5, #6, #7, and #8 shall not exceed 20% opacity on a 6 minute block average, except for no more than 2 six minute block averages in a continuous 3 hour period.

(18) The term of this Order shall be for five (5) years from the signature below.

DONE AND DATED IN AUGUSTA, MAINE THIS _____ DAY OF _____ 2001.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
MARTHA G. KIRKPATRICK, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 11/16/00

Date of application acceptance: 12/11/00

Date filed with the Board of Environmental Protection: _____

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