

Northern Maine Community College  
Aroostook County  
Presque Isle, Maine  
A-444-71-E-R/A

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

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

Northern Maine Community College (NMCC) of Presque Isle, Maine (formerly known as Northern Maine Technical College) has applied to renew their Air Emission License permitting the operation of emission sources associated with their educational facility.

NMCC replaced two boilers during the period of their last license. The previous license was not amended to reflect the increase in capacity of these boilers; therefore NMCC has requested that they be added as an After-the-Fact Amendment. The maximum capacity of all the boilers has been verified and corrected in this license.

B. Emission Equipment

NMCC is authorized to operate the following equipment:

**Fuel Burning Equipment**

<b>Equipment ID Number</b>	<b>Maximum Capacity (MMBtu/hr)</b>	<b>Maximum Firing Rate (gal/hr)</b>	<b>Fuel Type, % sulfur</b>	<b>Year Manufactured</b>
Boiler 600	3.78	27.0	#2 fuel oil, 0.35%	2003
Boiler 610	2.59	18.5	#2 fuel oil, 0.5%	1979
Boiler 650	4.76	34.0	#2 fuel oil, 0.35%	2000
Boiler 700	2.96	21.2	#2 fuel oil, 0.5%	1974
Boiler 725-1	2.59	18.5	#2 fuel oil, 0.5%	1982
Boiler 793-1	1.05	7.5	#2 fuel oil, 0.5%	1992
Boiler 793-2	1.05	7.5	#2 fuel oil, 0.5%	1992
Boiler 800	3.50	25.0	#2 fuel oil, 0.5%	1982

NMCC also operates a number of Parts Washers, two Paint Spray Booths in the Auto Body Shop and several small boilers and a waste oil burner in their Plumbing and Heating Shop.

### Insignificant Equipment

NMCC operates the following equipment that is considered to be insignificant pursuant to MEDEP Chapter 115, Appendix B(B.2). This equipment is listed for inventory purposes only.

<b>Equipment ID Number</b>	<b>Maximum Capacity (MMBtu/hr)</b>	<b>Maximum Firing Rate (gal/hr)</b>	<b>Fuel Type, % sulfur</b>
Boiler 725-3	0.87	9.26	Propane
Water Heater 725-2	0.105	0.75	#2 fuel oil, 0.5%
Furnace 311	0.175	1.25	#2 fuel oil, 0.5%
Furnace 255	0.189	1.35	#2 fuel oil, 0.5%
Furnace 226	0.245	1.75	#2 fuel oil, 0.5%
Furnace 310	0.315	2.25	#2 fuel oil, 0.5%
Boiler 752	0.350	2.5	#2 fuel oil, 0.5%
Boiler 751	0.623	4.45	#2 fuel oil, 0.5%
Boiler 269	0.910	6.5	#2 fuel oil, 0.5%
Boiler 750	0.910	6.5	#2 fuel oil, 0.5%
Water Heater 793-3	0.994	7.1	#2 fuel oil, 0.5%

#### C. Application Classification

The application for NMCC includes the licensing of replacement equipment but does not increase the annual facility fuel limit. Therefore, the license is considered to be a renewal plus an after-the-fact amendment to replace two boilers, and has been processed through Chapter 115 of the Department's regulations.

## 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 Department 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 Department's regulations. 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

Boilers B-610, B-700, B-725-1, B-793-1, B-793-2 and B-800 are used to provide heat and hot water for campus buildings. The boilers range in size from 1.05 to 3.50 MMBtu/hr and they are licensed to fire #2 fuel with a maximum sulfur content of 0.5%. Due to their small sizes, none of the boilers are subject to EPA's New Source Performance Standards (NSPS) Subpart Dc.

A summary of the BPT analysis for Boilers B-610, B-700, B-725-1, B-793-1, B-793-2 and B-800 is the following:

1. Total fuel use for the facility shall not exceed 250,000 gal/year of #2 fuel oil, based on a 12 month rolling total. The fuel oil fired in Boilers B-610, B-700, B-725-1, B-793-1, B-793-2 and B-800 shall not exceed a sulfur content of 0.5% by weight.
2. Chapter 106 regulates fuel sulfur content, however in this case a BPT analysis for SO<sub>2</sub> determined a more stringent limit of 0.5% was appropriate and shall be used.  
Chapter 103 regulates PM emission limits for fuel burning equipment with capacities greater than 3 MMBtu/hr. PM emission limits for the smaller boilers are based on AP-42 data. The PM<sub>10</sub> limits are derived from the PM limits.
3. NO<sub>x</sub> emission limits are based on data from similar #2 fired boilers of this size and age.
4. CO and VOC emission limits are based upon AP-42 data dated 9/98.
5. Visible emissions from each of the boilers shall not exceed 20% opacity on a 6-minute block average, except for no more than one 6-minute block averages in a 3-hour period.

Boilers B-600 and B-650 are new units. These boilers have maximum capacities of 3.78 and 4.76 MMBtu/hr, respectively. Since Boilers B-600 and B-650 are new units they are subject to BACT and will be required to fire #2 fuel with a maximum sulfur content of 0.35% by weight. The boilers are not subject to NSPS standards.

A summary of the BACT analysis for Boilers B-600 and B-650 is the following:

1. Total fuel use for the facility shall not exceed 250,000 gal/year of #2 fuel oil, based on a 12 month rolling total. The fuel oil fired in Boilers B-600 and B-650 shall not exceed a sulfur content of 0.35% by weight.
2. Chapter 106 regulates fuel sulfur content, however in this case the BACT analysis for SO<sub>2</sub> determines a more stringent limit of 0.35% is appropriate and shall be used.  
Chapter 103 regulates PM emission limits. The PM<sub>10</sub> limits are derived from the PM limits.
3. NO<sub>x</sub> emission limits are based on data from similar #2 fired boilers of this size and age.
4. CO and VOC emission limits are based upon AP-42 data dated 9/98.
5. Visible emissions from each of the boilers shall not exceed 20% opacity on a 6-minute block average, except for no more than one 6-minute block average in a 3-hour period.

C. Parts Washers

NMCC operates several parts washers. These units are be subject to the requirements of MEDEP Chapter 130.

D. Paint Spray Booths

NMCC operates two spray booths in the auto body shop. These booths are used infrequently for educational purposes as part of the auto body instruction at the facility. NMCC accepts a limit of 50 gallons per calendar year (combined) of VOC or HAP containing paint to be used in the Paint Spray Booths. This exempts the booths from additional requirements per MEDEP Chapter 115 Appendix B(B.11).

E. Plumbing and Heating Classroom Boilers

NMCC operates several small boilers and a waste oil burner in their Plumbing and Heating Shop. These units are repaired in the classroom for instructional purposes. They are fired very infrequently each year. Due to their size and the nature of their use, the Plumbing and Heating Shop boilers and waste oil burner are considered to be exempt from the requirements of the license.

F. Annual Emission Restrictions

Annual emissions at NMCC are calculated based on the use of 250,000 gallons of 0.5% sulfur fuel in the boilers. NMCC 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)

<b><u>Pollutant</u></b>	<b><u>Tons/Year</u></b>
PM	2.1
PM <sub>10</sub>	2.1
SO <sub>2</sub>	8.82
NO <sub>x</sub>	5.25
CO	0.63
VOC	0.05

**III. AMBIENT AIR QUALITY ANALYSIS**

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Modeling and monitoring are not required for a renewal if the total emissions of any pollutant released do not exceed the following:

<b><u>Pollutant</u></b>	<b><u>Tons/Year</u></b>
PM	50
PM <sub>10</sub>	25
SO <sub>2</sub>	50
NO <sub>x</sub>	100
CO	250

Based on the above total facility emissions, NMCC is below the emissions level required for modeling and monitoring.

**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-444-71-E-R/A subject to the following conditions:

**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 MRSA §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. [MEDEP 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. [MEDEP Chapter 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. [MEDEP Chapter 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. [MEDEP Chapter 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [MEDEP Chapter 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. [MEDEP Chapter 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. [MEDEP Chapter 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. [MEDEP Chapter 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. [MEDEP Chapter 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 the facility'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.[MEDEP Chapter 115]
- (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:
  - 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 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
  - 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 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
  - 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.

[MEDEP Chapter 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. [MEDEP Chapter 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 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. [MEDEP Chapter 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. [MEDEP Chapter 115]

### **SPECIFIC CONDITIONS**

- (16) **Boilers B-600, B-610, B-650, B-700, B-725-1, B-793-1, B-793-2 and B-800**

A. Emissions shall not exceed the following:

<b>Emission Unit</b>	<b>Pollutant</b>	<b>lb/MMBtu</b>	<b>Origin and Authority</b>
Boiler B-600	PM	0.12	MEDEP, Chapter 103, Section 2(B)(1)(a)
Boiler B-650	PM	0.12	MEDEP, Chapter 103, Section 2(B)(1)(a)
Boiler B-800	PM	0.12	MEDEP, Chapter 103, Section 2(B)(1)(a)

B. Emissions shall not exceed the following [MEDEP Chapter 115, BPT]:

Emission Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NOx (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler B-600	0.46	0.46	1.34	1.14	0.14	0.01
Boiler B-610	0.01	0.01	1.31	0.78	0.10	0.01
Boiler B-650	0.58	0.58	1.68	1.43	0.17	0.02
Boiler B-700	0.01	0.01	1.50	0.89	0.11	0.01
Boiler B-725-1	0.01	0.01	1.31	0.78	0.10	0.01
Boiler B-793-1	0.01	0.01	0.53	0.32	0.04	0.01
Boiler B-793-2	0.01	0.01	0.53	0.32	0.04	0.01
Boiler B-800	0.42	0.42	1.77	1.05	0.13	0.01

C. Visible emissions from each of the boilers shall not exceed 20% opacity on a 6-minute block average, except for no more than one 6-minute block average in a 3-hour period. [MEDEP Chapter 101]

(17) **Facility Fuel Use**

Total fuel use for NMCC shall not exceed 250,000 gallons per year, on a 12-month rolling total basis. Fuel oil fired in Boilers B-610, B-700, B-725-1, B-793-1, B-793-2 and B-800 shall not exceed a fuel sulfur content of 0.5% by weight. Fuel oil fired in Boilers B-600 and B-650 shall not contain greater than 0.35% sulfur by weight. Compliance shall be demonstrated by fuel records from the supplier showing the quantity of fuel delivered, the sulfur content of the fuel as a weight percent and an indication of the fuel storage tank to which the fuel was delivered. Records of annual fuel use shall be kept on a 12-month rolling total basis. [MEDEP Chapter 115, BPT]

(18) **Paint Spray Booths**

NMCC shall not exceed 50 gallons per calendar year (combined) of VOC and/or HAP containing paint used in the Paint Spray Booths. NMCC shall keep records of the amount of paint used in their paint spray booths on a calendar year basis. [MEDEP Chapter 115, BPT]

(19) **Parts Washer**

Parts washers at NMCC are subject to MEDEP Chapter 130.

- A. NMCC shall keep records of the amount of solvent added to each parts washer. [MEDEP Chapter 115, BPT]
- B. The following are exempt from the requirements of Chapter 130 [MEDEP Chapter 130]:
  1. Solvent cleaners using less than two liters (68 oz) of cleaning solvent with a vapor pressure of 1.00 mmHg, or less, at 20° C (68° F);
  2. Wipe cleaning; and,
  3. Cold cleaning machines using solvents containing less than or equal to 5% VOC by weight.
- C. The following standards apply to remote reservoir cold cleaning machines that are applicable sources under Chapter 130.
  1. NMCC shall attach a permanent conspicuous label to each unit summarizing the following operational standards [MEDEP Chapter 130]:
    - (i) Waste solvent shall be collected and stored in closed containers.
    - (ii) Cleaned parts shall be drained of solvent directly back to the cold cleaning machine by tipping or rotating the part for at least 15 seconds or until dripping ceases, whichever is longer.
    - (iii) Flushing of parts shall be performed with a solid solvent spray that is a solid fluid stream (not a fine, atomized or shower type spray) at a pressure that does not exceed 10 psig. Flushing shall be performed only within the freeboard area of the cold cleaning machine.
    - (iv) The cold cleaning machine shall not be exposed to drafts greater than 40 meters per minute when the cover is open.
    - (v) Sponges, fabric, wood, leather, paper products and other absorbent materials shall not be cleaned in the degreaser.
    - (vi) When a pump-agitated solvent bath is used, the agitator shall be operated to produce no observable splashing of the solvent against the tank walls or the parts being cleaned. Air agitated solvent baths may not be used.
    - (vii) Spills during solvent transfer shall be cleaned immediately. Sorbent material shall be immediately stored in covered containers.
    - (viii) Work area fans shall not blow across the opening of the degreaser unit.
    - (ix) The solvent level shall not exceed the fill line.
  2. The remote reservoir cold cleaning machine shall be equipped with a perforated drain with a diameter of not more than six inches. [MEDEP Chapter 130, BPT]

(20) **General Process Sources**

Visible emissions from any general process source shall not exceed an opacity of 20% on a 6-minute block average basis, except for no more than one 6-minute block average in a 1-hour period. [MEDEP Chapter 101]

- (21) NMCC 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 MRSA §605).
- (22) **Payment of Annual License Fee**  
NMCC shall pay the annual air emission license fee within 30 days of January 31st of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3.

DONE AND DATED IN AUGUSTA, MAINE THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ 2005.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
DAWN R. GALLAGHER, COMMISSIONER

**The term of this license shall be five (5) years from the signature date above.**

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: January 3, 2005

Date of application acceptance: January 6, 2005

Date filed with the Board of Environmental Protection: \_\_\_\_\_

This Order prepared by Rachel E. Pilling, Bureau of Air Quality.