



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

JAMES P. BROOKS
ACTING COMMISSIONER

Northern Maine Community College
Aroostook County
Presque Isle, Maine
A-444-71-G-A

**Departmental
Findings of Fact and Order
Air Emission License**

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 has applied to amend their Air Emission License permitting the operation of emission sources associated with their educational facility.

NMCC has requested to install a new oil-fired boiler with a maximum design heat input capacity of 2.0 MMBtu/hr. NMCC plans to remove existing boiler (Emissions Unit ID Boiler B-725-1) from its current Air Emissions License, A-444-71-F-R/A. The existing facility-wide fuel limit and the total licensed allowed emissions from the facility will not change as a result of this amendment.

B. Emission Equipment

NMCC is authorized to operate the following fuel burning equipment:

Fuel Burning Equipment

Equipment ID Number	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate (gal/hr)	Fuel Type *	Year Manufactured
Boiler B-600	3.78	27.0	#2 fuel oil	2003
Boiler B-610	2.59	18.5	#2 fuel oil	1979
Boiler B-650	4.76	34.0	#2 fuel oil	2000
Boiler B-700	2.0	14.4	#2 fuel oil	2010
Boiler B-725 **	2.0	14.4	#2 fuel oil	2011
Boiler B-793-1	1.05	7.5	#2 fuel oil	1992
Boiler B-793-2	1.05	7.5	#2 fuel oil	1992
Boiler B-800	3.50	25.0	#2 fuel oil	1982

* The facility fires fuel which meets the criteria in ASTM D396 for #2 fuel oil

** This new unit at Andrews Hall replaces the existing unit (0.9 MMBtu/hr) in Reed Dining Commons

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 04679-2094
(207) 764-0477 FAX: (207) 760-3143

NMCC also plans to remove a water heater (Emissions Unit ID 725-2) and replace with a propane fired unit less than 1.0 MMBtu/hr. Both of these units are considered insignificant based on size per 06-096 CMR 115 and are mentioned only for inventory purposes.

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 minor amendment to replace one boiler and has been processed through Major and Minor Source Air Emission License Regulations, 06-096 CMR 115.

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 06-096 CMR 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 06-096 CMR 100 of the Department's regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. New Boiler

NMCC is in the final phases of renovations to Andrews Hall and the Reed Dining Commons. The college will be adding a Smith RTS/28HE-7 high efficiency oil fired boiler with a maximum capacity of 2.0 MMBtu/hr and firing rate of 14.4 gallons per hour. NMCC is planning to remove a 0.9 MMBtu/hr oil fired boiler currently licensed in the Reed Dining Commons. The college is connecting the heating plant from Andrews Hall to Reed Commons to give greater boiler redundancy and greater efficiency.

The new 2.0 MMBtu/hr boiler is not subject to EPA's New Source Performance Standards (NSPS) Subpart Dc because it has a maximum design capacity less than 10 MMBtu/hr. However, the boiler is subject to *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* (40 CFR Part 63 Subpart JJJJJ). The unit is rated less than 10 MMBtu/hr and thus is not subject to PM, CO, or Mercury emission limits from 40 CFR Part 63 Subpart JJJJJ.

The new boiler is also subject to BACT and will be required to meet the following requirements. A summary of the BACT analysis for Boiler B-725:

1. Total fuel use for the facility shall not exceed 250,000 gal/year of #2 fuel oil, on a calendar year basis. The fuel oil fired in Boiler B-725 will meet the criteria of ASTM D396 for #2 oil.
2. Chapter 106 regulates fuel sulfur content, however in this case the BACT analysis for SO₂ is more stringent and shall be used.
3. This boiler is less than 3.0 MMBtu/hr and therefore 06-096 CMR 103 does not apply, however, BACT will require the boiler to meet 0.12 lb/MMBtu. The PM₁₀ limits are derived from the PM limits.
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 new boiler shall not exceed 10% opacity on a 6-minute block average, except for no more than one 6-minute block average in a 3-hour period.
7. NMCC shall meet the applicable requirements of 40 CFR Part 63 Subpart JJJJJ; including but not limited to the recordkeeping, reporting/notification requirements, and the implementation of a boiler tune-up program.

III. AMBIENT AIR QUALITY ANALYSIS

According to 06-096 CMR 115, the level of air quality analyses required for a minor source amendment 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, and
- will not violate applicable ambient air quality standards, or increment standards either alone or in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-444-71-G-A, subject to the conditions found in Air Emissions License, A-444-71-F-R/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.

SPECIFIC CONDITIONS

The following condition shall replace Condition (16) of Air Emission License, A-444-71-F-R/A:

(16) Boilers

A. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler B-600	PM	0.12	06-096 CMR 103, Section 2(B)(1)(a)
Boiler B-650	PM	0.12	06-096 CMR 103, Section 2(B)(1)(a)
Boiler B-800	PM	0.12	06-096 CMR 103, Section 2(B)(1)(a)
Boiler B-700	PM	0.12	06-096 CMR 115, BACT
Boiler B-725	PM	0.12	06-096 CMR 115, BACT

B. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

Emission Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (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	0.24	0.24	1.01	0.80	0.07	0.01
Boiler B-725	0.24	0.24	1.01	0.80	0.07	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 10% opacity on a 6-minute block average, except for no more than one 6-minute block average in a 3-hour period. [06-096 CMR 101]
- D. NMCC shall meet the applicable requirements of 40 CFR Part 63 Subpart JJJJJ; including but not limited to the recordkeeping, reporting/notification requirements, and the implementation of a boiler tune-up program. [06-096 CMR 115, BACT]

DONE AND DATED IN AUGUSTA, MAINE THIS 20th DAY OF May, 2011.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Melanie Brooks for
JAMES P. BROOKS, ACTING 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: March 7, 2011

Date of application acceptance: March 21, 2011

Date filed with the Board of Environmental Protection:

This Order prepared by Edwin Cousins, Bureau of Air Quality



