

**Washington County Community
College
Washington County
Calais, Maine
A-806-71-E-A/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

Washington County Community College of Calais, Maine has applied to renew their expired license, permitting the operation of emission sources associated with their educational facility. Washington County Community College is also updating the license to reflect a boiler system replacement of boiler #1.

In addition, the capacities are being corrected on all of the previously licensed units per the most recent Bureau of Air Quality inspection report. In this license, the maximum burner firing rates were used to calculate the capacities rather than using the boilerplate capacity ratings.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Fuel Burning Equipment

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (gal/hr)</u>	<u>Date of Manufact.</u>	<u>Fuel Type</u>	<u>Stack #</u>
Boiler #1 (consists of four 0.42 MMBtu/hr Weil-McLain Boilers in series)	1.68	12.0	2005	#2 fuel	1
Boiler #2 (consists of four 0.42 MMBtu/hr Weil-McLain Boilers in series)	1.68	12.0	2004	#2 fuel	2
Boiler #3 (consists of three 2.77 MMBtu/hr HB Smith Boilers in series)	8.32	59.4	2002	#2 fuel	3
Boiler #4 (HB Smith Boiler)	2.79	19.9	1992	#2 fuel	4
Boiler #5 (Peerless Boiler)	1.12	8.0	1992	#2 fuel	5

Note: Boiler capacities have been corrected from the previous license. The capacities of all the boilers are now based on the maximum burner ratings, rather than the boiler nameplate capacity. Boiler 1 was replaced in the fall of 2005 with the four Weil-McLain Boilers in series. Boiler 5 was estimated not to need a license previously, but the burner capacity calculations showed it was over 1 MMBtu/hr and it is therefore now included in the license.

Process Equipment

<u>Equipment</u>	<u>Description</u>	<u>Date of Manufact.</u>	<u>Pollution Control Equipment</u>	<u>Stack #</u>
EU #1	Filter and hydrocarbon degrader	1999	N/A	N/A
EU#2	Filter and hydrocarbon degrader	1999	N/A	N/A
EU #3	Filter and hydrocarbon degrader	1999	N/A	N/A

These are microbial bath VOC degraders that do not contain a VOC-based solvent. VOC are biologically digested.

C. Application Classification

Washington County Community College is considered to be an existing source applying for an after-the-fact renewal, since a complete application was submitted two months after the license expired. The Department has determined the facility is a minor source and the application has been processed through Chapter 115 of the Department's regulations. The facility is licensed below the major source thresholds and is considered a natural minor.

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 an after-the-fact renewal requires an analysis similar to a Best Available Control Technology analysis per Chapter 115 of the Department's regulations. 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.

B. Boiler 1

Boiler 1 is comprised of four Weil-McLain boilers in series, for a total capacity of 1.68 MMBtu/yr, firing #2 fuel oil. Boiler 1 is located in the upper dorms. In November 2005, Washington County Community College replaced the previous five boilers in series (total capacity 1.925 MMBtu/hr) with the new Weil-McLain series boiler. Each burner has a manufacturer's rating of 3.0 gal/hr (12.0 gal/hr total), which is higher than the total rating on the boiler.

Based on the size of Boiler 1, it is not subject to the New Source Performance Standards (NSPS) Subpart Dc for steam generating units (Boiler 1 is less than 10 MMBtu/hr).

A summary of the BACT analysis for Boiler 1 is the following:

PM/PM₁₀ – 0.08 lb/MMBtu

SO₂ – combustion of #2 fuel oil which meets the criteria in ASTM D396
(0.5 lb/MMBtu, equating to no greater than 0.5% sulfur)

This is a change from the previous license.

NO_x – 0.3 lb/MMBtu

CO – 5 lb/1000 gal: AP-42, Table 1.3-1 (dated 9/98)

VOC – 0.34 lb/1000 gal: AP-42, Table 1.3-3 (dated 9/98)

Opacity – Visible emissions shall not exceed an opacity of 20% on a 6
minute block average basis, except for no more than one (1) six (6)
minute block average in a 3 hour period.

C. Boiler 2

Boiler 2 is comprised of four Weil-McLain boilers in series, for a total capacity of 1.68 MMBtu/yr, firing #2 fuel oil. The boiler was manufactured and installed in 2004. Boiler 2 is located in the lower dorms. Each burner has a manufacturer's rating of 3.0 gal/hr (12.0 gal/hr total), which is higher than the total rating on the boiler.

Based on the size of Boiler 2, it is not subject to the New Source Performance Standards (NSPS) Subpart Dc for steam generating units.

A summary of the BACT analysis for Boiler 2 is the following:

PM/PM₁₀ – 0.08 lb/MMBtu

SO₂ – combustion of #2 fuel oil which meets the criteria in ASTM D396
(0.5 lb/MMBtu, equating to no greater than 0.5% sulfur)

This is a change from the previous license.

NO_x – 0.3 lb/MMBtu

CO – 5 lb/1000 gal: AP-42, Table 1.3-1 (dated 9/98)

VOC – 0.34 lb/1000 gal: AP-42, Table 1.3-3 (dated 9/98)

Opacity – Visible emissions shall not exceed an opacity of 20% on a 6
minute block average basis, except for no more than one (1) six (6)
minute block average in a 3 hour period.

D. Boiler 3

Boiler 3 is comprised of three HB Smith boilers in series, for a total capacity of 8.32 MMBtu/yr, firing #2 fuel oil. The boiler was manufactured and installed in 2002. The three burners are each rated higher than the posted maximum capacity on the unit, so the burner ratings were used to calculate the total maximum capacity.

Based on the size of Boiler 3, it is not subject to the New Source Performance Standards (NSPS) Subpart Dc for steam generating units.

A summary of the BACT analysis for Boiler 3 is the following:

PM/PM₁₀ – 0.08 lb/MMBtu

SO₂ – combustion of #2 fuel oil which meets the criteria in ASTM D396
(0.5 lb/MMBtu, equating to no greater than 0.5% sulfur)

This is a change from the previous license.

NO_x – 0.3 lb/MMBtu

CO – 5 lb/1000 gal: AP-42, Table 1.3-1 (dated 9/98)

VOC – 0.34 lb/1000 gal: AP-42, Table 1.3-3 (dated 9/98)

Opacity – Visible emissions shall not exceed an opacity of 20% on a 6 minute block average basis, except for no more than one (1) six (6) minute block average in a 3 hour period.

E. Boiler 4

Boiler 4 is a HB Smith Boiler with a burner rated capacity of 2.79 MMBtu/yr, firing #2 fuel oil. The boiler was manufactured and installed in 1992.

Based on the size of Boiler 4, it is not subject to the New Source Performance Standards (NSPS) Subpart Dc for steam generating units.

A summary of the BACT analysis for Boiler 4 is the following:

PM/PM₁₀ – 0.08 lb/MMBtu

SO₂ – combustion of #2 fuel oil which meets the criteria in ASTM D396
(0.5 lb/MMBtu, equating to no greater than 0.5% sulfur)

This is a change from the previous license.

NO_x – 0.3 lb/MMBtu

CO – 5 lb/1000 gal: AP-42, Table 1.3-1 (dated 9/98)

VOC – 0.34 lb/1000 gal: AP-42, Table 1.3-3 (dated 9/98)

Opacity – Visible emissions shall not exceed an opacity of 20% on a 6 minute block average basis, except for no more than one (1) six (6) minute block average in a 3 hour period.

F. Boiler 5

Boiler 5 has a burner rated capacity of 1.12 MMBtu/yr, firing #2 fuel oil. The boiler was manufactured and installed in 1992.

Based on the size of Boiler 5, it is not subject to the New Source Performance Standards (NSPS) Subpart Dc for steam generating units.

A summary of the BACT analysis for Boiler #5 is the following:

PM/PM₁₀ – 0.08 lb/MMBtu

SO₂ – combustion of #2 fuel oil which meets the criteria in ASTM D396
(0.5 lb/MMBtu, equating to no greater than 0.5% sulfur)

This is a change from the previous license.

NO_x – 0.3 lb/MMBtu

CO – 5 lb/1000 gal: AP-42, Table 1.3-1 (dated 9/98)

VOC – 0.34 lb/1000 gal: AP-42, Table 1.3-3 (dated 9/98)

Opacity – Visible emissions shall not exceed an opacity of 20% on a 6
minute block average basis, except for no more than one (1) six (6)
minute block average in a 3 hour period.

G. Facility Fuel Use Limit

The total fuel use for the facility shall not exceed 280,000 gal/year of #2 fuel oil,
based on a 12 month rolling total. Records shall be maintained to demonstrate
compliance with the annual fuel limit.

H. Degreasers

Washington County Community College operates three cold cleaning microbial
degreasers located in the automotive shop, the diesel shop, and the heavy
equipment maintenance shop. The units do not use solvent and produce no VOC
emissions; therefore, they are not subject to MEDEP Chapter 130.

I. Annual Emissions

Washington County Community College shall be restricted to the following
annual emissions, based on a 12 month rolling total, calculated using the 280,000
gal/year of #2 fuel oil limit:

Total Licensed Annual Emission for the Facility
Tons/year
(used to calculate the annual license fee)

	PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Total Boiler TPY	1.6	1.6	9.8	5.9	0.7	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:

Pollutant	Tons/Year
PM	25
PM ₁₀	25
SO ₂	50
NO _x	100
CO	250

Based on the above total facility emissions, Washington County Community College 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-806-71-E-A/N subject to 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.

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**

A. Boilers 1-5 shall fire #2 fuel oil. [MEDEP Chapter 115, BPT]

B. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #3	PM	0.08	MEDEP, Chapter 115, BPT

C. Emissions shall not exceed the following [MEDEP Chapter 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 #1 (1.68 MMBtu/hr)	0.13	0.13	0.84	0.5	0.06	0.004
Boiler #2 (1.68 MMBtu/hr)	0.13	0.13	0.84	0.5	0.06	0.004
Boiler #3 (8.32 MMBtu/hr)	0.67	0.67	4.2	2.5	0.3	0.02
Boiler #4 (2.79 MMBtu/hr)	0.22	0.22	1.4	0.8	0.1	0.007
Boiler #5 (1.12 MMBtu/hr)	0.09	0.09	0.56	0.3	0.04	0.003

D. Visible emissions from each of the boilers shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period. [MEDEP Chapter 101]

(17) **Fuel Limit**

Total fuel use for the facility's boilers shall not exceed 280,000 gal/yr of #2 fuel oil . The #2 fuel oil shall meet the criteria of ASTM D396. Compliance shall be demonstrated by fuel records from the supplier showing the quantity and type of fuel delivered. Records of annual fuel use shall be maintained on a 12- month rolling total basis. [MEDEP Chapter 115, BPT]

(18) Washington County Community College 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 [Title 38 MRSA §605].

(19) **Payment of Annual License Fee**

Washington County Community College shall pay the annual air emission license fee within 30 days of December 30th 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 , 2006.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAVID P. LITTELL, 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: February 15, 2006

Date of application acceptance: February 16, 2006

Date filed with the Board of Environmental Protection: _____