

St. Joseph Hospital)	Departmental
Penobscot County)	Finding of Fact and Order
Bangor, Maine)	Air Emission License
A-237-71-L-R)	

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

St. Joseph Hospital (SJH) of Bangor, Maine has applied to renew their Air Emission License permitting the operation air emission sources associated with their health-care facility.

B. Emission Equipment

St. Joseph Hospital is authorized to operate the following air emission units:

Fuel Burning Equipment

<u>Equipment</u>	<u>Maximum Capacity (MMBTU/hr)</u>	<u>Fuel Type, % Sulfur</u>	<u>Maximum Firing Rate (gal/hr)</u>	<u>Stack #</u>
Boiler #1	5.3	#5, 0.7%	35	1
Boiler #2	5.3	#5, 0.7%	35	1
Boiler #3	10.5	#5, 0.7%	70	1
Boiler #4	10.5	#5, 0.7%	70	1
Emrg. gen #5	3.7	diesel, 0.05%	27	1
Emrg. gen #6	5.6	diesel, 0.05%	41	2

C. Application Classification

The application for SJH does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of current licensed emission units only and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (last amended December 24, 2005).

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 (last amended December 24, 2005). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

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 #1, #2, #3 and #4

St. Joseph Hospital operates four oil-fired boilers to provide hospital building heat and hot water. Boilers #1 and #2 have design heat input capacities of 5.3 MMBtu/hr each and Boilers #3 and #4 have design heat input capacities of 10.5 MMBtu/hr each. All four oil-fired boilers were installed in 1963. They are therefore not subject to New Source Performance Standards (NSPS) 40 CFR Part 60 Subpart Dc, for boilers with heat inputs greater than 10 MMBtu/hr and constructed after June 9, 1989.

BPT for Boilers #1, #2, #3 and #4 is the following:

1. *Low Sulfur Fuel*, 06-096 CMR 106 (last amended June 9, 1999) regulates fuel sulfur content. However the use of #5 fuel oil with a sulfur content not to exceed 0.7% is more stringent and shall be considered BPT.
2. *Fuel Burning Equipment Particulate Emission Standard*, 06-096 CMR 103 (last amended November 3, 1990) regulates PM emission limits. The PM₁₀ limits are derived from the PM limits.
3. NO_x emission limits based on data for boilers of similar sizes and ages.
4. CO and VOC emission limits based upon AP-42 data dated 9/98 for oil-fired boilers.
5. Visible emissions from the combined stack serving Boilers #1, #2, #3 and #4 (stack #1) shall not exceed 30% opacity on a 6 minute block average, except for no more than three (3), six (6) minute block averages in a 3 hour period.

C. Emergency Generators #5 and #6

St. Joseph Hospital operates two emergency diesel generators to supply electricity to their computer system, emergency lighting in the building, and boiler feed water pumps in the event normal electrical service is interrupted. Emergency Generators #5 and #6 have heat input rates of 3.7 MMBtu/hour and 5.6 MMBtu/hr, respectively.

Emergency generators are only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. Back-up generators are not to be used for prime power, or for ISO New England's OP-4 events, when reliable offsite power is available.

BPT for Emergency Generators #5 and #6 is the following:

1. 06-096 CMR 106 regulates fuel sulfur content. However the use of diesel fuel with a sulfur content not to exceed 0.05% is more stringent and shall be considered BPT.
2. The emergency generators shall each be limited to 150 hr/yr of operation based on a 12 month rolling total. Compliance shall be demonstrated by a written log of all generator operating hours.
3. 06-096 CMR 103 regulates PM emission limits. The PM₁₀ limits are derived from the PM limits.
4. NO_x, CO and VOC emission limits based upon EPA AP-42 data dated 10/96.
5. Emergency Generator #5 shares a stack with the boilers (stack #1). Therefore, visible emissions from Emergency Generator #5 shall not exceed 30% opacity on a six minute block average basis, except for no more than three (3), six (6) minute block averages in a 3 hour period. Visible emissions from Emergency Generator #6 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 3 hour period.

D. Annual Facility Emissions

1. Boilers #1, #2, #3 and #4 shall not exceed a combined total of 300,000 gallons of #5 fuel oil with a sulfur content not to exceed 0.7% by weight, on a 12-month rolling total basis.
2. Each emergency generator shall not operate for more than 150 hours per 12-month rolling year.

St. Joseph Hospital)
Penobscot County)
Bangor, Maine)
A-237-71-L-R 4

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

3. The following emissions shall not be exceeded on a 12-month rolling total:

**Total Annual Licensed Emissions for the Facility
Tons/Year**
(used to calculate the annual license fee)

	PM	PM₁₀	SO₂	NO_x	CO	VOC
Boilers	4.50	4.50	16.55	8.25	0.75	0.24
Generator #5	0.03	0.03	0.01	1.22	0.26	0.10
Generator #6	0.05	0.05	0.02	1.34	0.36	0.04
Total TPY	4.58	4.58	16.58	10.81	1.37	0.38

III. AMBIENT AIR QUALITY ANALYSIS

According to 06-096 CMR 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Based on the total facility emissions, St. Joseph Hospital 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-237-71-L-R 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 M.R.S.A. §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. [06-096 CMR 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. [06-096 CMR 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. [06-096 CMR 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. [06-096 CMR 115]
 - (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 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. [06-096 CMR 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. [06-096 CMR 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. [06-096 CMR 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. [06-096 CMR 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.
[06-096 CMR 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.

St. Joseph Hospital)
Penobscot County)
Bangor, Maine)
A-237-71-L-R 7

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

[06-096 CMR 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. [06-096 CMR 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. [06-096 CMR 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. [06-096 CMR 115]

SPECIFIC CONDITIONS

- (16) Boilers #1, #2, #3 and #4
1. Total fuel use for the boilers shall not exceed 300,000 gal/yr of #5 fuel oil with a maximum sulfur content not to exceed 0.7% by weight. Compliance shall be demonstrated by fuel records from the supplier showing the quantity of fuel delivered and the percent sulfur of the fuel. Records of annual fuel use shall be kept on a 12-month rolling total basis. [06-096 CMR 115, BPT].
 2. Boilers #1 - #4 shall each have a PM emission limit of 0.20 lb/MMBtu. [06-096 CMR 103]

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

Boiler Emission Limits

	Boiler #1 (lb/hr)	Boiler #2 (lb/hr)	Boiler #3 (lb/hr)	Boiler #4 (lb/hr)
PM	1.06	1.06	2.10	2.10
PM₁₀	1.06	1.06	2.10	2.10
SO₂	3.90	3.90	7.72	7.72
NO_x	1.94	1.94	3.85	3.85
CO	0.18	0.18	0.35	0.35
VOC	0.06	0.06	0.11	0.11

4. Visible emissions from the combined stack that serves Boilers #1 - #4 (stack #1) shall not exceed 30% opacity on a 6 minute block average basis, except for no more than three (3), six (6) minute block averages in a 3 hour period. [06-096 CMR 101]
- (17) Emergency Generators #5 and #6
1. Emergency Generators #5 and #6 shall each fire diesel fuel with a maximum sulfur content of 0.05% by weight. Compliance shall be based on fuel records from the supplier showing the quantity of fuel delivered and the percent sulfur of the fuel. [06-096 CMR 115, BPT]
 2. Each emergency generator shall be limited to 150 hours per year of operation, based on a 12 month rolling total. An hour meter shall be operated and maintained on each emergency generator. [06-096 CMR 115, BPT]
 3. The Emergency Generators shall only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. The Emergency Generators shall not to be used for prime power when reliable offsite power is available. A log shall be maintained documenting the date, time, and reason for operation. [06-096 CMR 115, BPT].

St. Joseph Hospital)
Penobscot County)
Bangor, Maine)
A-237-71-L-R 9

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

4. Emissions from Emergency Generators #5 and #6 shall not exceed the following: [06-096 CMR 115, 06-096 CMR 103, BPT]

Emergency Generator Emission Limits

	Emergency Generator #5		Emergency Generator #6	
	(lb/MMBtu)	(lb/hr)	(lb/MMBtu)	(lb/hr)
PM	0.12	0.44	0.12	0.67
PM₁₀	--	0.44	--	0.67
SO₂	--	0.19	--	0.29
NO_x	--	16.32	--	17.92
CO	--	3.52	--	4.76
VOC	--	1.30	--	0.50

5. Emergency Generator #5 shares a stack with boilers #1 - #4 (stack #1). Therefore, visible emissions from Emergency Generator #5 shall not exceed 30% opacity on a six (6) minute block average basis, except for no more than three (3), six (6) minute block averages in a 3 hour period. Visible emissions from Emergency Generator #6 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 3 hour period. [06-096 CMR 101]

St. Joseph Hospital)
Penobscot County)
Bangor, Maine)
A-237-71-L-R 10

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

- (18) SJH 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 M.R.S.A. §605).

DONE AND DATED IN AUGUSTA, MAINE THIS _____ DAY OF _____ 2008.

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: 10/1/2007

Date of application acceptance: 10/17/2007

Date filed with the Board of Environmental Protection: _____

This Order prepared by Jonathan Voisine, Bureau of Air Quality.