

Southern Maine Medical Center)
York County)
Biddeford, Maine)
A-006-71-L-M)

Departmental
Finding of Fact and Order
Air Emission License
Amendment #1

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

Southern Maine Medical Center (SMMC) in Biddeford, Maine was issued Air Emission License A-006-71-K-A/R on October 31st, 2003 to operate air emission sources associated with their health care facility.

SMMC has requested a modification to their license to reflect the addition of new fuel burning equipment to heat a new office building and a new emergency generator to provide power for an expanded emergency services section of the hospital.

B. Emission Equipment

SMMC has requested to add the following equipment to their License:

Electric Generating Equipment

<u>Emission Unit</u>	<u>Max. Capacity</u>	<u>Max. Firing Rate</u>	<u>Fuel, %Sulfur</u>
Emergency Generator #3	4.768 MMBtu/hr	34.8 gal/hr	Diesel Fuel, 0.05% Sulfur

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**Fuel Burning Equipment
for New Office Building**

Emission Unit	Max. Capacity (MMBTU/hr)	Max. Firing Rate, (scf/hr)	Date of Construction	Fuel Type, % Sulfur	Stack #
*Boiler #4	0.924	905.9	2006	natural gas	3
*Boiler #5	0.768	752.9	2006	natural gas	4
*AH #1	0.400	392.2	2006	natural gas	5
*AH #2	0.400	392.2	2006	natural gas	6
*AH #3	0.400	392.2	2006	natural gas	7

* All fuel burning equipment for the new office building is considered to be insignificant per MEDEP Chapter 115 and is listed for inventory purposes only.

C. Application Classification

This amendment will increase emissions by less than 4 ton/year for each single pollutant and less than 8 ton/year for all pollutants combined. Therefore, this modification is determined to be a minor revision and has been processed as such.

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

B. Emergency Generator #3

SMMC is planning to install one emergency generator designated Generator #3, which is rated at 4.768 MMBtu/hr

Back-up 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 when reliable offsite power is available.

A summary of the BACT analysis for Generator #3 is the following:

1. Generator #3 shall fire only diesel fuel with a maximum sulfur content not to exceed 0.05% by weight.
2. Generator #3 shall be limited to 500 hr/yr of operation based on a 12 month rolling total. An hour meter shall be operated and a written operating log shall be kept for compliance purposes.
3. Chapter 106 regulates fuel sulfur content, however in this case a BACT analysis for SO₂ determined a more stringent limit of 0.05% was appropriate and shall be used.
4. Chapter 103 regulates PM emission limits. However, the generator manufacturer has provided an emission limit of 0.05 gm/hp-hr which is more stringent and shall be considered BACT. The PM₁₀ limits are derived from the PM limits.
5. NO_x, CO, and VOC emission limits are based on documentation provided by the generator manufacturer.
6. Visible emissions from Generator #3 shall each 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.

C. Facility Emissions and Fuel Use Caps

1. SMMC shall be limited to 300,000 gal/yr (12 month rolling total) of #2 Fuel with a sulfur content not to exceed 0.35% in boilers #1, #2, and #3.
2. SMMC shall be limited to 1000 combined hrs (12 month rolling total) of operation for Generators #1 and #2.
3. SMMC shall be limited to 500 hrs (12 month rolling total) of operation for Generator #3.

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4. Emissions for the facility are based on firing the yearly limit of 300,000 gal of #2 fuel oil, at 0.35% Sulfur, and firing Natural Gas for the balance of the year in the Boilers, firing Generators #1 and #2 for the maximum of 1000 hours combined, and the firing of Generator #3 for the maximum of 500 hours.

Total Allowable Annual Emissions for the Facility

12 month rolling total

(used to calculate the annual license fee)

	PM tons/yr	PM₁₀ tons/yr	SO₂ tons/yr	NO_x tons/yr	CO tons/yr	VOC tons/yr
Boilers, Fuel Oil	2.10	2.10	7.46	3.00	0.75	0.08
Boilers, Natural Gas	5.91	5.91	0.08	11.47	9.66	0.63
Generators #1 and #2	0.44	0.44	1.32	16.32	3.52	1.30
Generator #3	0.02	0.02	0.06	2.02	0.13	0.05
Total (tons/yr)	8.47	8.47	8.92	32.81	14.06	2.06

III. AMBIENT AIR QUALITY ANALYSIS

A modeling analysis was performed for the original license A-006-74-E-A/R, issued March 17, 1992. It has been determined that the revision to this license is not significant enough to impact the modeling analysis. Maine Ambient Air Quality Standard (MAAQS) will not be violated by this revision.

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.

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The Department hereby grants Air Emission License A-006-71-L-M, subject to the conditions of Air Emission License A-006-71-K-A/R, 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

- (1) Generator #3
 - A. SMMC shall limit the Generator #3 to 500 hr/yr of operation (based on a 12 month rolling total). An hour meter shall be maintained and operated on the Back-up Generator. [MEDEP Chapter 115, BACT]
 - B. Generator #3 shall only be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. The Back-up Generator shall not be used for prime power when reliable offsite power is available. A log shall be maintained documenting the date, time, and reason for operation. [MEDEP Chapter 115, BACT]
 - C. The Back-up Generator shall fire diesel fuel with a sulfur limit not to exceed 0.05% by weight. Compliance shall be based on fuel records from the supplier documenting the percent sulfur of the fuel. [MEDEP Chapter 115, BACT]
 - D. Emissions shall not exceed the following [MEDEP Chapter 115, Chapter 103, BACT]:

Emission Unit		PM	PM₁₀	SO₂	NO_x	CO	VOC
Generator #3	gm/hp-hr	0.05	-	-	-	-	-
	lb/hr	0.08	0.08	0.24	8.07	0.52	0.18

- E. Visible emissions from Generator #3 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]

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(2) SMMC 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).

(3) **Payment of Annual License Fee**
SMMC shall pay the annual air emission license fee within 30 days of **December 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 2006.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAVID P. LITTELL, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-006-71-K-A/R.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 6/19/2006

Date of application acceptance: 6/20/2006

Date filed with the Board of Environmental Protection: _____

This order prepared Jonathan Voisine, Bureau of Air Quality