STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

JAMES P. BROOKS
ACTING COMMISSIONER

Maine Medical Center
Cumberland County
Portland, Maine
A-431-71-J-A (SM)

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

After review of the air emissions license amendment 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., §344 and §590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

1. Maine Medical Center (MMC) was issued Air Emission License A-431-71-I-R on January 9, 2007, permitting the operation of emission sources associated with their health care facility.

2. The equipment addressed in this license is located at 22 Bramhall Street, Portland, Me.

3. MMC has requested an amendment to their license in order to add a second emergency generator to the Central Utilities Plant.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Electrical Generation Equipment

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate (gal/hr)	Fuel Type, % sulfur	Stack #
CUP Generator #2	19.8	141.3	Diesel, 0.0015%	1

C. Application Classification

A new emission unit at a minor source is considered a major modification based on whether or not expected emission increases exceed the "Significant Emission" levels as defined in the Department's regulations. The emission increases for a new emission unit are determined by its maximum future license allowed emissions, as follows:

Pollutant	Current License (TPY)	Future License (TPY)	Net Change (TPY)	Significance Level (TPY)
PM	6.9	6.9	0.08	100
PM_{10}	6.9	6.9	0.08	100
SO_2	91.3	91.3	0.01	100
NO_x	81.5	90.0	8.53	100
CO	22.8	23.1	0.30	100
VOC	8.0	8.2	0.18	50

Therefore, the modification is minor for MMC, and has been processed as such.. As a new emission unit, all criteria pollutants from the CUP Generator #2 are subject to Best Available Control Technology (BACT) requirements.

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 (as amended). 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 *Definitions Regulation*, 06-096 CMR 100 (as amended). 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. NSPS Generator

"Emergency stationary internal combustion engine" is defined in 40 CFR Part 60, Subpart IIII as any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary engines used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary engines used to pump water in the case of fire or flood. Stationary engines used to supply power to an electric grid or that supply power as part of a financial arrangement with another entity are not considered to be emergency engines.

CUP Generator #2 was ordered after July 11, 2005 and manufactured after April 1, 2006, and is therefore subject to New Source Performance Standards 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.*

The CUP Generator #2 is subject to limited requirements under the provisions 40 CFR Part 63, Subpart ZZZZ. Subpart ZZZZ (63.6590(c)) requires new compression ignition engines to meet the requirements of Subpart ZZZZ by meeting the requirements contained in 40 CFR Part 60, Subpart IIII.

A summary of the BACT analysis for the CUP Generator #2 is the following:

1. CUP Generator #2 shall fire only diesel fuel with a maximum sulfur content not to exceed 15 ppm.
2. CUP Generator #2 shall be limited to 100 hours per year of operation for maintenance checks and readiness testing. CUP Generator #2 shall be limited to 500 hours per year of total operation. Both of these limits are based on a 12-month rolling total. Compliance shall be demonstrated by a written log of all generator operating hours.
3. CUP Generator #2 shall be equipped with a non-resettable hour meter.

4. 06-096 CMR 103 regulates PM emission limits.
5. PM_{10}, NO_x, CO, and VOC emission limits are based upon emission data dated supplied by the generator manufacturer's representative.
6. MMC shall operate and maintain the CUP Generator #2 in accordance with the manufacturer's written instructions. MMC shall not change settings that are not approved in writing by the manufacturer.
7. Visible emissions from the CUP Generator #2 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.

C. Annual Emissions

MMC shall be restricted to the following annual emissions, based on a 12-month rolling total:

Total Licensed Annual Emissions for the Facility
Tons per year
(Used to calculate the annual license fee)

	PM	PM_{10}	SO_2	NO_x	CO	VOC
Boilers - #2 Oil	5.38	5.38	90.64	42.75	15.75	6.75
Boiler Room Generator	0.15	0.15	0.04	3.20	0.70	0.26
Fire Pump Generator	0.07	0.07	0.02	1.43	0.31	0.11
NDF #1 Generator	0.22	0.22	0.06	3.85	0.90	0.11
NDF #2 Generator	0.22	0.22	0.06	3.85	0.90	0.11
Computer Room Generator	0.07	0.07	0.03	2.64	0.57	0.21
Generator #7	0.35	0.35	0.15	12.85	2.45	0.30
CUP Generator #1	0.39	0.39	0.24	10.89	1.19	0.17
CUP Generator #2	***0.08***	***0.08***	***0.01***	***8.53***	***0.30***	***0.18***
Total TPY	**6.9**	**6.9**	**91.3**	**90.0**	**23.1**	**8.2**

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-431-71-J-A subject to the conditions found in Air Emission License A-431-71-I-R, and in 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.

The following Specific Condition Number (22) shall be added to Air Emission License A-431-71-I-R:

(22) **CUP Generator #2 - NSPS Emergency Generator**

A. The CUP Generator #2 shall fire only diesel fuel with a maximum sulfur content not to exceed 15 ppm. [40 CFR 60.4207(b)]

B. Compliance with the sulfur content limits shall be based on fuel records from the supplier showing the type of fuel delivered and the sulfur content of the fuel. [06-096 CMR 115, BACT]

C. CUP Generator #2 shall be limited to 100 hours per year of operation for maintenance checks and readiness testing. CUP Generator #2 shall be limited to 500 hours per year of total operation. Both of these limits are based on a 12-month rolling total. Compliance shall be demonstrated by a written log of all generator operating hours. [40 CFR 60.4211(E) and 06-096 CMR 115, BACT]

D. CUP Generator #2 shall be equipped with a non-resettable hour meter. [40 CFR 60.4209(a)]

E. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
CUP Generator #2	PM	0.12	06-096 CMR 103(2)(B)(1)(a)

F. 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)
CUP Generator #2	0.30	0.30	0.03	34.10	1.20	0.70

G. MMC shall operate and maintain CUP Generator #2 in accordance with the manufacturer's written instructions. MMC shall not change settings that are not approved in writing by the manufacturer. [40 CFR 60.4211(a)]

H. Visible emissions from the CUP Generator #2 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. [06-096 CMR 101]

DONE AND DATED IN AUGUSTA, MAINE THIS 7th DAY OF June, 2011.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Melanie Loyzim for
JAMES P. BROOKS, ACTING COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-431-71-I-R.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 03/22/2011
Date of application acceptance: 03/30/2011

Date filed with the Board of Environmental Protection:

This Order prepared by N. Lynn Cornfield, Bureau of Air Quality.

Filed
JUN - 9 2011
State of Maine
Board of Environmental Protection