



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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GOVERNOR

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**Mercy Hospital
Cumberland County
Portland, Maine
A-982-71-B-R (SM)**

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

After review of the air emissions license renewal 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

Mercy Hospital has applied to renew their Air Emission License permitting the operation of emission sources associated with their Fore River Short Stay Hospital medical care facility.

The equipment addressed in this license is located at 175 Fore River Parkway, Portland, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Boilers

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate</u>	<u>Fuel Type, % sulfur</u>	<u>Mfg. Date</u>	<u>Install. Date</u>	<u>Stack #</u>
Boiler 1	16.3	16,329 cf/hr	Natural Gas	2007	2008	1
		116.6 gal/hr	#2 Fuel Oil, 0.5%			
Boiler 2	16.3	16,329 cf/hr	Natural Gas	2007	2008	1
		116.6 gal/hr	#2 Fuel Oil, 0.5%			

Generators

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Mfg. Date</u>	<u>Install. Date</u>	<u>Stack #</u>
Gen 1	10.0	72.5	Diesel, 0.0015%	2007	2007	2

C. Application Classification

The application for Mercy Hospital does not include the installation of new or modified equipment. Emission factors have been updated to reflect the most current values resulting in modified licensed emissions. Therefore, the license is considered to be a renewal of currently licensed emission units only and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended). With the operational limitations on the emergency generator, the facility is licensed below the major source thresholds and is considered a synthetic 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 *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 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 and #2

Mercy Hospital operates two low emission Cleaver Brooks boiler units, Boilers #1 and #2. The two boilers are each rated at 16.3 MMBtu/hr and were manufactured and installed in 2007 and 2008, respectively. Boilers #1 and #2 are dual firing units, capable of firing natural gas and #2 fuel oil. Natural gas is the primary fuel source with #2 fuel oil being used as a back-up. The boilers both exhaust through Stack #1 which has a height of 74 feet above ground and an inside flue diameter of 2.5 feet.

Due to the size and year of installation, Boilers #1 and #2 are subject to the New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hr manufactured after June 9, 1989. Mercy Hospital submitted initial notifications and performed an Initial Performance Test on June 9, 2008 to demonstrate compliance with the Subpart.

Notification submitted by the facility to the EPA and the Department included the date of construction, anticipated start-up, and actual start-up. This notification included the design heat input capacity of the boilers and the type of fuel to be combusted. [40 CFR §60.48c(a)] The performance test consisted of fuel supplier certification of the sulfur content of the fuel fired in Boilers #1 and #2. The fuel supplier certification contained the name of the oil supplier and a statement from the oil supplier that the oil complied with ASTM specifications for #2 fuel oil. Mercy Hospital shall continue to maintain records in accordance with 40 CFR §60.48c(f). [40 CFR §60.44c and 40 CFR §60.48c]

1. BPT Findings

The BPT emission limits for the boilers were based on the following:

Natural Gas

PM/PM ₁₀ –	0.010 lb/MMBtu: Cleaver Brooks Boiler Book, Table A1-16
SO ₂ –	0.6 lb/MMscf: AP-42, Table 1.4-2 (dated 7/98); 0.001 lb/MMBtu
NO _x –	0.035 lb/MMBtu: Cleaver Brooks Boiler Book, Table A1-16
CO –	0.040 lb/MMBtu: Cleaver Brooks Boiler Book, Table A1-16
VOC –	0.004 lb/MMBtu: Cleaver Brooks Boiler Book, Table A1-16
Opacity –	Visible emissions from Stack #1 serving Boilers #1 and #2 when one or both boilers is firing natural gas, shall not exceed an opacity of 10% on a 6-minute block average basis, except for no more than one (1) six (6) minute block average in a 3-hour period.

#2 Fuel Oil

PM/PM ₁₀ –	0.025 lb/MMBtu: Cleaver Brooks Boiler Book, Table A1-17
SO ₂ –	Based on firing ASTM D396 compliant #2 fuel oil (0.5% sulfur); 0.5 lb/MMBtu
NO _x –	0.120 lb/MMBtu: Cleaver Brooks Boiler Book, Table A1-17
CO –	0.039 lb/MMBtu: Cleaver Brooks Boiler Book, Table A1-17
VOC –	0.002 lb/MMBtu: Cleaver Brooks Boiler Book, Table A1-17
Opacity –	Visible emissions from Stack #1 serving Boilers #1 and #2, when either boiler is firing #2 fuel oil, shall not exceed 20% opacity on a 6-minute block average basis, except for no more than one (1) six (6) minute block average in a 3-hour period.

The BPT emission limits for the boilers are the following:

<u>Unit</u>	<u>Fuel Source</u>	<u>PM (lb/hr)</u>	<u>PM₁₀ (lb/hr)</u>	<u>SO₂ (lb/hr)</u>	<u>NO_x (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>
Boiler #1 (16.3 MMBtu/hr)	Natural Gas	0.16	0.16	0.01	0.57	0.65	0.07
	#2 Fuel Oil	0.41	0.41	8.16	1.96	0.64	0.03
Boiler # 2 (16.3 MMBtu/hr)	Natural Gas	0.16	0.16	0.01	0.57	0.65	0.07
	#2 Fuel Oil	0.41	0.41	8.16	1.96	0.64	0.03

Mercy Hospital shall be limited to a combined total of 1,000,000 gallons/yr of #2 fuel oil for Boilers #1 and #2 based on a calendar year.

Prior to January 1, 2016, any fuel oil fired in Boilers #1 and #2 shall be ASTM D396 compliant #2 fuel oil (maximum sulfur content of 0.5% by weight). Per 38 MRSA §603-A(2)(A)(3), beginning January 1, 2016, the facility shall fire #2 fuel oil with a maximum sulfur content limit of 0.005% by weight (50 ppm), and beginning January 1, 2018, the facility shall fire #2 fuel oil with a maximum sulfur content limit of 0.0015% by weight (15 ppm).

2. Periodic Monitoring

Periodic monitoring for the boilers shall include recordkeeping to document fuel use both on a monthly and calendar year basis. Documentation shall include the quantity and type of fuel used and sulfur content of the fuel, if applicable.

3. 40 CFR Part 63 Subpart JJJJJ

If Boilers #1 and #2 are operated as gas-fired boilers, they will not be subject to *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* (40 CFR Part 63 Subpart JJJJJ). [40 CFR § 63.11195 (e)] A gas-fired boiler is defined by this Subpart as follows:

any boiler that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing firing liquid fuel shall not exceed a combined total of 48 hours during any calendar year. [40 CFR § 63.11237]

Operation of Boilers #1 or #2 outside of these parameters may trigger applicability of 40 CFR Part 63 Subpart JJJJJ for the respective boiler(s). Records shall be maintained to document operation of Boilers #1 and #2 as gas-fired boilers, as defined.

Operation of Boiler #1 or Boiler #2 such that it does not fit the definition of “gas-fired boiler” given above would cause the respective boiler to be considered an existing industrial boiler as defined in 40 CFR §63.11237 that is located at or is part of an area source of hazardous air pollutants (HAP), as defined in §63.2. As such, the respective boiler(s) may be subject to 40 CFR Part 63, Subpart JJJJJ. However, 40 CFR Part 63, Subpart JJJJJ is currently under reconsideration by the EPA, and the potential applicability of the Subpart to this source may change, contingent upon the final specifications and requirements of the proposed amendments.

For informational purposes, a summary of the currently promulgated federal 40 CFR Part 63, Subpart JJJJJ requirements that would be applicable to Boilers #1 and #2 is provided below. At this time, the Maine Department of Environmental Protection has not taken delegation of this area source MACT (Maximum Achievable Control Technology) rule promulgated by EPA; however, Mercy Hospital is still be subject to the requirements if Boiler #1 and/or Boiler #2 are not operated as a gas-fired boiler.

a. Compliance Dates, Notifications, and Work Practice Requirements

i. Initial Notification of Compliance

An Initial Notification submittal to EPA was due on September 17, 2011. [40 CFR Part 63.11225(a)(2)]

ii. Boiler Tune-Up Program

(a) A boiler tune-up program shall be implemented to include the tune-up of applicable boilers by March 21, 2012, according to the rule currently in place. [40 CFR Part 63.11196(a)(1)] However, a No Action Assurance letter was issued on March 13, 2012, stating that EPA will exercise its enforcement discretion to not pursue enforcement action for failure to complete the required tune-up by the stated compliance date. The rule is expected to have a future compliance date in either 2013 or 2014 once the final revisions are promulgated.

(b) The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:

1. As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted; however, the burner must be inspected at least once every 36 months. [40 CFR Part 63.11223(b)(1)]

2. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 CFR Part 63.11223(b)(2)]
 3. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. [40 CFR Part 63.11223(b)(3)]
 4. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 CFR Part 63.11223(b)(4)]
 5. Measure the concentration in the effluent stream of CO in parts per million (ppm), by volume, and oxygen in volume percent, before and after adjustments are made. [40 CFR Part 63.11223(b)(5)]
 6. If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within one week of start-up. [40 CFR Part 63.11223(b)(7)]
- (c) A Notification of Compliance Status shall be submitted to EPA no later than 120 days after conducting the initial boiler tune-up. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(b)]
- (d) The facility shall implement a boiler tune-up program after the initial tune-up and initial compliance report has been submitted.
1. Each tune-up shall be conducted at a frequency specified by the rule and based on the size and age of the boiler. [40 CFR Part 63.11223(a)]
 2. The tune-up compliance report shall be maintained onsite and, if requested, submitted to EPA. The report shall contain the concentration of CO in the effluent stream (ppmv) and oxygen in volume percent, measured before and after the boiler tune-up, a description of any corrective actions taken as part of the tune-up of the boiler, and the type and amount of fuel used over the 12 months prior to the tune-up of the boiler. [40 CFR Part 63.11223(b)(6)] The compliance report shall also include the company name and address; a compliance statement signed by a responsible official certifying truth, accuracy, and completeness; and a description of any deviations and corrective actions. [40 CFR Part 63.11225(b)]
- iii. Energy Assessment
- (a) A one-time energy assessment shall be performed by a qualified energy assessor on the applicable boilers by March 21, 2014. [40 CFR Part 63.11196(a)(3)]

- (b) The energy assessment shall include a visual inspection of the boiler system; an evaluation of operating characteristics of energy using systems, operating and maintenance procedures, and unusual operating constraints; an inventory of major systems consuming energy from affected boiler(s); a review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage; a list of major energy conservation measures; a list of the energy savings potential of the energy conservation measures identified; and a comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments. [40 CFR Part 63, Table 2(4)]
- (c) A Notification of Compliance Status shall be submitted to EPA no later than 120 days after conducting the energy assessment. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(c)]

b. Recordkeeping

Records shall be maintained consistent with the requirements of 40 CFR Part 63 Subpart JJJJJ including the following [40 CFR Part 63.11225(c)]: copies of notifications and reports with supporting compliance documentation; identification of each boiler, the date of tune-up, procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned; documentation of fuel type(s) used monthly by each boiler; the occurrence and duration of each malfunction of the boiler; and actions taken during periods of malfunction to minimize emissions and actions taken to restore the malfunctioning boiler to its usual manner of operation. Records shall be in a form suitable and readily available for expeditious review.

Notification forms and additional rule information can be found on the following website: <http://www.epa.gov/ttn/atw/boiler/boilerpg.html>.

C. Gen 1

Mercy Hospital operates one emergency generator, designated Gen 1. The emergency generator is rated at 10.0 MMBtu/hr and fires diesel fuel. Gen 1 was manufactured and installed in 2007 and 2008, respectively.

1. BPT Findings

The BPT emission limits for the generators are based on the following:

- PM/PM₁₀ – 0.20 g/kW-hr: 40 CFR §60.4205(b) and 06-096 CMR 115, BPT; 0.04 lb/MMBtu
- SO₂ – Based on firing 0.0015% sulfur, 0.0015 lb/MMBtu
- NO_x – 6.40 g/kW-hr: 40 CFR §60.4205(b) and 06-096 CMR 115, BPT; 1.39 lb/MMBtu
- CO – 0.11 g/hp-hr: Caterpillar Technical Data, Item 003, dated 4/6/2007; 0.04 lb/MMBtu
- VOC – 0.05 g/hp-hr: Caterpillar Technical Data, Item 003, dated 4/6/2007; 0.02 lb/MMBtu
- Opacity – Visible emissions from the diesel generator shall not exceed 20% opacity on a 6-minute block average basis, except for no more than two (2) six (6) minute block averages in a 3-hour period.

The BPT emission limits for the emergency generator are the following:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Gen 1 (10.0 MMBtu/hr) diesel, 0.0015% S	0.44	0.44	0.02	13.95	0.36	0.17

Gen 1 shall be limited to 500 hours of operation a year, based on a calendar year. Mercy Hospital shall keep records of the hours of operation for the unit.

2. 40 CFR Part 60, Subpart IIII

The federal regulation 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE)* is applicable to the emergency generator listed above since the unit was ordered after July 11, 2005 and manufactured after April 1, 2006.

Emergency Definition:

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 ICE 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 ICE used to pump water in the case of fire or flood, etc.

Stationary CI ICE 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.

40 CFR Part 60, Subpart IIII Requirements:

The generator shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in 40 CFR §60.4202. [40 CFR §60.4205(b)]

The diesel fuel fired in the generator shall not exceed 15 ppm sulfur (0.0015% sulfur). [40 CFR §60.4207(b)]

A non-resettable hour meter shall be installed and operated on the generator. [40 CFR §60.4209(a)]

The generator shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by Mercy Hospital that are approved by the engine manufacturer. Mercy Hospital may only change those emission-related settings that are permitted by the manufacturer. [40 CFR §60.4211(a)]

The generator shall be limited to 100 hours/year for maintenance and testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving or generating income or a financial arrangement with another entity). [40 CFR §60.4211(f)]

No initial notification is required for the emergency engine. [40 CFR §60.4214(b)]

3. 40 CFR Part 63, Subpart ZZZZ

By meeting the requirements of 40 CFR Part 60 Subpart IIII, Gen 1 also meets the requirements found in the *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 CFR Part 63, Subpart ZZZZ. However, Gen 1 is considered exempt from the requirements of Subpart ZZZZ since it is categorized as an institutional emergency engine. An institutional emergency engine is defined by this Subpart as follows:

an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious

establishments, police stations, and fire stations. [40 CFR § 63.6675]

D. Annual Emissions

1. Total Annual Emissions

Mercy Hospital shall be restricted to the following annual emissions, based on a calendar year. The tons per year limits were calculated based on 1,000,000 gal/yr of #2 fuel oil with the remaining balance of boiler operating time being fired with natural gas.

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

	PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Boilers – Natural Gas	0.72	0.72	0.04	2.50	2.86	0.29
Boilers – #2 fuel Oil	1.75	1.75	35.00	8.40	2.73	0.14
Gen 1	0.11	0.11	0.004	3.49	0.09	0.04
Total TPY	2.6	2.6	35.0	14.4	5.7	0.5

2. Greenhouse Gases

Greenhouse gases are considered regulated pollutants as of January 2, 2011, through 'Tailoring' revisions made to EPA's *Approval and Promulgation of Implementation Plans*, 40 CFR Part 52, Subpart A, §52.21 Prevention of Significant Deterioration of Air Quality rule. Greenhouse gases, as defined in 06-096 CMR 100 (as amended), are the aggregate group of the following gases: Carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. For licensing purposes, greenhouse gases (GHG) are calculated and reported as carbon dioxide equivalents (CO₂e).

Based on the facility's fuel use limit(s), the worst case emission factors from AP-42, IPCC (Intergovernmental Panel on Climate Change), and *Mandatory Greenhouse Gas Reporting*, 40 CFR Part 98, and the global warming potentials contained in 40 CFR Part 98, Mercy Hospital is below the major source threshold of 100,000 tons of CO₂e per year. Therefore, no additional licensing requirements are needed to address GHG emissions at this time.

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. Modeling is not required for a renewal if the total emissions of any pollutant released do not exceed the following and there are no extenuating circumstances:

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

Based on the total facility licensed emissions, Mercy Hospital is below the emissions level required for modeling.

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 in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-982-71-B-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-A. [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.
- [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 and #2**

- A. Mercy Hospital is licensed to fire either #2 fuel oil or natural gas in Boilers #1 and #2. Natural gas is the primary fuel source and #2 fuel oil shall be used only for emergency backup.
- B. Fuel
1. Total fuel use for Boilers #1 and #2 when firing #2 fuel oil as an emergency backup shall not exceed a combined total of 1,000,000 gal/yr of #2 fuel oil based on a calendar year.
 2. Prior to January 1, 2016, the #2 fuel oil fired in the boilers shall be ASTM D396 compliant (max. sulfur content of 0.5% by weight). [06-096 CMR 115, BPT]
 3. Beginning January 1, 2016, the facility shall fire #2 fuel oil with a maximum sulfur content limit of 0.005% by weight (50 ppm). [38 MRSA §603-A(2)(A)(3)]
 4. Beginning January 1, 2018, the facility shall fire #2 fuel oil with a maximum sulfur content limit of 0.0015% by weight (15 ppm). [38 MRSA §603-A(2)(A)(3)]
 5. Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and the percent sulfur of the fuel delivered (if applicable). Records of annual fuel use shall be kept on a monthly and calendar year basis. [06-096 CMR 115, BPT]

- C. Emissions from each boiler shall not exceed the following [06-096 CMR 115, BPT]:

Emission Unit	PM (lb/hr)	PM₁₀ (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler – NG	0.16	0.16	0.01	0.57	0.65	0.07
Boiler – Fuel Oil	0.41	0.41	8.16	1.96	0.64	0.03

- D. Visible Emissions

1. When one or both boilers is firing natural gas, visible emissions from the common stack serving Boilers #1 and #2 (Stack #1) shall not exceed 10% opacity on a 6-minute block average basis, except for no more than one (1) six (6) minute block average in a 3-hour period. [06-096 CMR 101]
2. When firing #2 fuel oil or a combination #2 fuel oil and natural gas, visible emissions from the common stack serving Boilers #1 and #2 (Stack #1) shall not exceed 20% opacity on a 6-minute block average, except for no more than one (1) six (6) minute block average in a 3-hour period. [06-096 CMR 101]

- E. Mercy Hospital shall comply with all requirements of 40 CFR Part 60, Subpart Dc applicable to Boilers #1 and #2 including, but not limited to, the following:

1. Mercy Hospital shall record and maintain records of the amounts of each fuel combusted during each calendar month. [40 CFR §60.48c(g)]
2. Mercy Hospital shall submit to EPA and the Department semi-annual reports. These reports shall include the calendar dates covered in the reporting period and records of fuel supplier certifications. The semi-annual reports are due within 30 days of the end of each 6-month period.
3. The following address for EPA shall be used for any reports or notifications required to be copied to them:

Compliance Clerk
USEPA Region 1
5 Post Office Sq. Suite 100
Boston, MA 02109-3912

(17) **Gen 1**

- A. The emergency generator, designated Gen 1, shall be limited to 500 hours per year total operation, based on a calendar year. Compliance shall be demonstrated by a written log of all generator operating hours. [06-096 CMR 115]
- B. Emissions for the emergency generator shall not exceed the following [06-096 CMR 115, BPT and 40 CFR §60.4205(b)]:

Emission Unit	PM (lb/hr)	PM₁₀ (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Gen 1	0.44	0.44	0.02	13.95	0.36	0.17

- C. Visible emissions from the diesel generator 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]
- D. Gen 1 shall meet the applicable requirements of 40 CFR Part 60, Subpart III, including the following:
 - 1. The generator shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in §60.4202. [40 CFR §60.4205(b)]
 - 2. The diesel fuel fired in the generator shall not exceed 15 ppm sulfur (0.0015% sulfur). Compliance with the fuel sulfur content limit shall be based on fuel records from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [40 CFR §60.4207(b) and 06-096 CMR 115]
 - 3. A non-resettable hour meter shall be installed and operated on the generator. [40 CFR §60.4209(a)]
 - 4. The generator shall be limited to 100 hours/year for maintenance and testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving or generating income or a financial arrangement with another entity). These limits are based on a 12-month rolling total. Compliance shall be demonstrated by a written log of the generator operating hours. [40 CFR §60.4211(f) and 06-096 CMR 115]
 - 5. The generator shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures

**Mercy Hospital
Cumberland County
Portland, Maine
A-982-71-B-R (SM)**

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developed by Mercy Hospital that are approved by the engine manufacturer. Mercy Hospital may only change those emission-related settings that are permitted by the manufacturer. [40 CFR §60.4211(a)]

- (18) Mercy Hospital 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 18 DAY OF December, 2012.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: *Marc Allen Robert Corne for*
PATRICIA W. AHO, COMMISSIONER

The term of this license shall be ten (10) years from the signature date above.

[Note: If a complete renewal application, as determined by the Department, is submitted prior to expiration, then pursuant to Title 5 MRSA §10002, all terms and conditions of the license shall remain in effect until the Department takes final action on the renewal of the license.]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 8/13/2012

Date of application acceptance: 8/23/2012

Date filed with the Board of Environmental Protection:

This Order prepared by Allison M. Hazard, Bureau of Air Quality.



