



DEPARTMENT ORDER

**Mount Desert Island Hospital  
Hancock County  
Bar Harbor, Maine  
A-1170-71-A-N**

**Departmental  
Findings of Fact and Order  
Air Emission License  
After-the-Fact**

**FINDINGS OF FACT**

After review of the air emission license application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes (M.R.S.) § 344 and § 590, the Maine Department of Environmental Protection (Department) finds the following facts:

**I. REGISTRATION**

A. Introduction

Mount Desert Island Hospital (MDI Hospital) has applied for an Air Emission License after-the-fact for the operation of emission sources associated with their healthcare facility.

The equipment addressed in this license is located at 10 Wayman Lane, Bar Harbor, Maine.

B. Title, Right, or Interest

In their application, MDI Hospital submitted copies of a property deed demonstrating ownership of the facility. MDI Hospital has provided sufficient evidence of title, right, or interest in the facility for purposes of this air emission license.

C. Emission Equipment

The following equipment is addressed in this air emission license:

**Boilers**

<b>Equipment</b>	<b>Max. Capacity (MMBtu/hr)</b>	<b>Maximum Firing Rate</b>	<b>Fuel Type</b>	<b>Date of Manuf.</b>	<b>Date of Install.</b>	<b>Stack #</b>
Existing Boiler #1	4.2	29.9 gal/hr	Distillate fuel	1988	1988	1
Existing Boiler #2	2.5	19.9 gal/hr	Distillate fuel	1985	1985	1
Boiler #1 (Proposed)	6.1	43.8 gal/hr 65.2 gal/hr*	Distillate fuel LPG	2023	2023	2
Boiler #2 (Proposed)	6.1	43.8 gal/hr 65.2 gal/hr*	Distillate fuel LPG	2023	2023	2

\*Based on a liquid petroleum gas (LPG) heating value of 94.0 MMBtu per 1,000 gal

### Stationary Engines

Equipment	Max. Input Capacity (MMBtu/hr)	Rated Output Capacity (ekW)	Fuel Type	Firing Rate (gal/hr)	Date of Manuf.	Date of Install.
Generator #1	8.6	810	Distillate fuel	62.6	2018	2018

MDI Hospital may operate small stationary engines smaller than 0.5 MMBtu/hr. These engines are considered insignificant activities and are not required to be included in this license. However, they are still subject to applicable State and Federal regulations. More information regarding requirements for small stationary engines is available on the Department's website at the link below.

<http://www.maine.gov/dep/air/publications/docs/SmallRICEGuidance.pdf>

Additionally, MDI Hospital may operate portable engines used for maintenance or emergency-only purposes. These engines are considered insignificant activities and are not required to be included in this license. However, they may still be subject to applicable State and Federal regulations.

#### D. Definitions

Distillate Fuel means the following:

- Fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials (ASTM) in ASTM D396;
- Diesel fuel oil numbers 1 or 2, as defined in ASTM D975;
- Kerosene, as defined in ASTM D3699;
- Biodiesel, as defined in ASTM D6751; or
- Biodiesel blends, as defined in ASTM D7467.

Portable or Non-Road Engine means an internal combustion engine which is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. This definition does NOT include engines which remain or will remain at a location (excluding storage locations) for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. A location is any single site at a building, structure, facility, or installation. Any engine that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period.

An engine is not a non-road (portable) engine if it remains or will remain at a location for more than 12 consecutive months or for a shorter period of time if sited at a seasonal source. A seasonal source is a source that remains in a single location for two years or more and which operates for fewer than 12 months in a calendar year. If an engine operates at a

seasonal source for one entire season, the engine does not meet the criteria of a non-road (portable) engine and is subject to applicable stationary engine requirements.

Records or Logs mean either hardcopy or electronic records.

E. Application Classification

All rules, regulations, or statutes referenced in this air emission license refer to the amended version in effect as of the date this license was issued.

MDI Hospital is classified as an existing source that is applying for its first air emission license<sup>1</sup> after-the-fact. The Department has determined the facility is a minor source, and the application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (C.M.R.) ch. 115.

F. Facility Classification

With the operating hours restriction on Generator #1, the facility is licensed as follows:

- As a synthetic minor source of air emissions for NO<sub>x</sub>, because MDI Hospital is subject to license restrictions that keep facility emissions below major source thresholds for criteria pollutants; and
- As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for HAP.

**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 C.M.R. ch. 100. Separate control requirement categories exist for new and existing equipment.

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 C.M.R. ch. 100. BACT is a top-down approach to selecting air emission controls considering economic, environmental, and energy impacts.

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<sup>1</sup> Although this facility held an air emission license in the past, equipment removal caused it to drop below licensing thresholds such that the license was surrendered in 2000. Since then, equipment additions have shifted it to again be subject to licensing requirements, as of the addition of Generator #1 in 2018.

B. Existing Boilers #1 and #2

MDI Hospital operates Existing Boilers #1 and #2 that produce steam to meet their heat and hot water needs. The boilers are rated at 4.2 MMBtu/hr and 2.5 MMBtu/hr, respectively, and each fire distillate fuel. Existing Boiler #1 was manufactured and installed in 1988. Existing Boiler #2 was manufactured and installed in 1985. Both boilers exhaust through common Stack #1.

Existing Boilers #1 and #2 are licensed to fire distillate fuel which, by definition, has a sulfur content of 0.5% or less by weight. Pursuant to 38 M.R.S. § 603-A(2)(A)(3), as of July 1, 2018, no person shall import, distribute, or offer for sale any distillate fuel with a sulfur content greater than 0.0015% by weight (15 ppm). Therefore, the distillate fuel purchased or otherwise obtained for use in Existing Boilers #1 and #2 shall not exceed 0.0015% by weight (15 ppm).

1. BACT Findings

The following summarizes the BACT analysis for control of emissions from Existing Boilers #1 and #2.

a. Particulate Matter (PM, PM<sub>10</sub>, PM<sub>2.5</sub>)

The boilers fire only distillate fuel, a low-ash content fuel. Add-on pollution controls are not economically feasible.

BACT for PM/PM<sub>10</sub>/PM<sub>2.5</sub> emissions from Existing Boilers #1 and #2 is the emission limits listed in the tables below.

b. Sulfur Dioxide (SO<sub>2</sub>)

MDI Hospital fires distillate fuel with a sulfur content not to exceed 0.0015% by weight. The use of this fuel results in minimal emissions of SO<sub>2</sub>, and additional add-on pollution controls are not economically feasible.

BACT for SO<sub>2</sub> emissions from Existing Boilers #1 and #2 is the use of ultra-low-sulfur distillate fuel and the emission limits listed in the tables below.

c. Nitrogen Oxides (NO<sub>x</sub>)

Several control strategies were considered for the control of NO<sub>x</sub> including Selective Catalytic Reduction (SCR), Selective Non-Catalytic Reduction (SNCR), water/steam injection, and flue gas recirculation (FGR).

Both SCR and SNCR are technically feasible control technologies for minimizing NO<sub>x</sub>. Both methods include injection of a NO<sub>x</sub> reducing agent, typically ammonia or urea, into the boiler combustion gases, where the reagent reacts with NO<sub>x</sub> to form nitrogen and water. Each technology is effective within a specific temperature range, 500 – 1,200 °F for SCR and 1,400 – 1,600 °F for SNCR. However, both SCR

and SNCR have the negative environmental impact of emissions of unreacted ammonia. In addition, due to the initial capital cost and the annual operating costs, these systems are typically only considered cost effective for units larger than Existing Boilers #1 and #2.

Water/steam injection and FGR can attain similar NO<sub>x</sub> reduction efficiencies through lowering burner flame temperature and thereby reducing thermal NO<sub>x</sub> formation. However, both control strategies reduce the boiler's fuel efficiency.

BACT for NO<sub>x</sub> emissions from Existing Boilers #1 and #2 is the emission limits listed in the tables below.

d. Carbon Monoxide (CO) and Volatile Organic Compounds (VOC)

Strategies for the control of CO and VOC include oxidation catalysts, thermal oxidizers, and use of an oxygen trim system.

Oxidation catalysts and thermal oxidizers both have high capital, maintenance, and operational costs considering the size of the boiler in question. The installation of oxygen trim systems on these existing boilers have associated retrofitting and installation costs. These controls were determined to be economically infeasible.

BACT for CO and VOC emissions from Existing Boilers #1 and #2 is the emission limits listed in the tables below.

e. Emission Limits

The BACT emission limits for Existing Boilers #1 and #2 were based on the following:

Distillate Fuel

PM/PM<sub>10</sub>/PM<sub>2.5</sub> – 0.08 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT  
SO<sub>2</sub> – based on firing distillate fuel with a maximum sulfur content of 0.0015% by weight  
NO<sub>x</sub> – 20 lb/1,000 gal based on AP-42 Table 1.3-1 dated 5/10  
CO – 5 lb/1,000 gal based on AP-42 Table 1.3-1 dated 5/10  
VOC – 0.34 lb/1,000 gal based on AP-42 Table 1.3-3 dated 5/10  
Visible Emissions – 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Existing Boilers #1 and #2 are the following:

Unit	Pollutant	lb/MMBtu
Existing Boiler #1	PM	0.08

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	PM <sub>2.5</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Existing Boiler #1	0.33	0.33	0.33	0.01	0.60	0.15	0.01
Existing Boiler #2	0.20	0.20	0.20	0.004	0.36	0.09	0.01

2. Visible Emissions

Visible emissions from Stack #1 shall not exceed 20% opacity on a six-minute block average basis.

3. Periodic Monitoring

Documentation shall include the sulfur content of the fuel. [06-096 C.M.R. ch. 115, BACT]

4. New Source Performance Standards (NSPS): 40 C.F.R. Part 60, Subpart Dc

Due to their sizes and years of manufacture, Existing Boilers #1 and #2 are not subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989. [40 C.F.R. § 60.40c]

C. Boilers #1 and #2 (Proposed)

MDI Hospital is proposing to install two new boilers that will each fire LPG and distillate fuel, referred to as Boilers #1 and #2 from here on in this license. Each boiler will be a Cleaver-Brooks Model CBLE-4W with a heat input capacity of 6.1 MMBtu/hr. The boilers will exhaust through common Stack #2. MDI Hospital shall permanently shut down Existing Boilers #1 and #2 upon completion of commissioning of the new Boilers #1 and #2, not to exceed 90 days after initial startup of Boilers #1 and #2.

Boilers #1 and #2 are licensed to fire distillate fuel which, by definition, has a sulfur content of 0.5% or less by weight. Pursuant to 38 M.R.S. § 603-A(2)(A)(3), as of July 1, 2018, no person shall import, distribute, or offer for sale any distillate fuel with a sulfur content greater than 0.0015% by weight (15 ppm). Therefore, the distillate fuel purchased or otherwise obtained for use in Boilers #1 and #2 shall not exceed 0.0015% by weight (15 ppm).

1. BACT Findings

The following summarizes the BACT analysis submitted by MDI Hospital for control of emissions from Boilers #1 and #2.

a. Particulate Matter (PM, PM<sub>10</sub>, PM<sub>2.5</sub>)

MDI Hospital has proposed to burn only LPG and distillate fuel, both low-ash content fuels, in these boilers. The combustion of LPG and distillate fuel in boilers of this type results in negligible levels of PM. The use of emissions control equipment such as filters to remove PM from the boiler exhaust would not be cost-effective nor practical for boilers of this size and fuel type.

BACT for PM/PM<sub>10</sub>/PM<sub>2.5</sub> emissions from Boilers #1 and #2 is the emission limits listed in the tables below.

b. Sulfur Dioxide (SO<sub>2</sub>)

The sulfur content of LPG and distillate fuel oil is very low, resulting in minimal SO<sub>2</sub> emissions. The sulfur content of the distillate fuel will not exceed 0.0015% by weight. Additional add-on pollution controls are not economically feasible for boilers of this size and fuel type.

BACT for SO<sub>2</sub> emissions from Existing Boilers #1 and #2 is the use of LPG and distillate fuel and the emission limits listed in the tables below.

c. Nitrogen Oxides (NO<sub>x</sub>)

Combustion control technologies such as low NO<sub>x</sub> burners, flue gas recirculation (FGR), Selective Catalytic Reduction (SCR), Selective Non-Catalytic Reduction (SNCR), and water/steam injection are available for use on industrial boilers for control of NO<sub>x</sub> emissions when firing LPG or distillate fuel.

Both SCR and SNCR have the negative environmental impact of emissions of unreacted ammonia. In addition, due to the initial capital cost and the annual operating costs, these systems are typically only considered cost effective for units larger than Boilers #1 and #2. The proposed CBLE-4W boilers will utilize the FGR that is included with the built-in burners, which are designed specifically for lowered NO<sub>x</sub> emissions.

BACT for NO<sub>x</sub> emissions from Boilers #1 and #2 is the FGR, modern boiler-burner design and combustion controls, and the emission limits listed in the tables below.

d. Carbon Monoxide (CO) and Volatile Organic Compounds (VOC)

Strategies for the control of CO and VOC include oxidation catalysts, thermal oxidizers, and use of an oxygen trim system.

Oxidation catalysts and thermal oxidizers both have high capital, maintenance, and operational costs considering the size of the boiler in question. The installation of oxygen trim systems on these existing boilers have associated retrofitting and installation costs. These controls were determined to be economically infeasible.

BACT for CO and VOC emissions from Boilers #1 and #2 is the emission limits listed in the tables below.

e. Emission Limits

The BACT emission limits for Boilers #1 and #2 were based on the following:

LPG

- PM/ PM<sub>10</sub>/PM<sub>2.5</sub> – 0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
- SO<sub>2</sub> – 0.0011 lb/MMBtu based on manufacturer’s specifications
- NO<sub>x</sub> – 0.05 lb/MMBtu based on manufacturer’s specifications
- CO – 0.04 lb/MMBtu based on manufacturer’s specifications
- VOC – 0.008 lb/MMBtu based on manufacturer’s specifications
- Visible Emissions – 06-096 C.M.R. ch. 115, BACT

Distillate Fuel

- PM/PM<sub>10</sub>/PM<sub>2.5</sub> – 0.08 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
- SO<sub>2</sub> – based on firing distillate fuel with a maximum sulfur content of 0.0015% by weight
- NO<sub>x</sub> – 0.115 lb/MMBtu based on manufacturer’s specifications
- CO – 0.039 lb/MMBtu based on manufacturer’s specifications
- VOC – 0.0024 lb/MMBtu based on manufacturer’s specifications
- Visible Emissions – 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Boilers #1 and #2 are the following:

Unit	Pollutant	lb/MMBtu
Boiler #1 <i>LPG</i>	PM	0.05
Boiler #2 <i>LPG</i>	PM	0.05
Boiler #1 <i>distillate fuel</i>	PM	0.08
Boiler #2 <i>distillate fuel</i>	PM	0.08



Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	PM <sub>2.5</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1 <i>LPG</i>	0.31	0.31	0.31	0.007	0.31	0.25	0.05
Boiler #2 <i>LPG</i>	0.31	0.31	0.31	0.007	0.31	0.25	0.05
Boiler #1 <i>distillate fuel</i>	0.49	0.49	0.49	0.01	0.70	0.24	0.01
Boiler #2 <i>distillate fuel</i>	0.49	0.49	0.49	0.01	0.70	0.24	0.01

2. Visible Emissions

Visible emissions from Stack #2 shall not exceed 20% opacity on a six-minute block average basis when distillate fuel is being fired in either boiler.

Visible emissions from Stack #2 shall not exceed 10% opacity on a six-minute block average basis when propane is the only fuel being fired in the boilers.

3. Periodic Monitoring

Documentation shall include the type of fuel used and sulfur content of the fuel, if applicable. [06-096 C.M.R. ch. 115, BACT]

4. New Source Performance Standards (NSPS): 40 C.F.R. Part 60, Subpart Dc

Due to their size, Boilers #1 and #2 are not subject to 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989. [40 C.F.R. § 60.40c]

D. National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements for Boilers: 40 C.F.R. Part 63, Subpart JJJJJ

Existing Boilers #1 and #2 and Boilers #1 and #2 are subject to 40 C.F.R. Part 63, Subpart JJJJJ. Existing Boilers #1 and #2 are considered existing oil boilers rated less than 5 MMBtu/hr. Boilers #1 and #2 are considered new boilers rated less than 10 MMBtu/hr. [40 C.F.R. §§ 63.11193 and 63.11195]

Applicable federal 40 C.F.R. Part 63, Subpart JJJJJ requirements include the following. Additional rule information can be found on the following website: <https://www.epa.gov/stationary-sources-air-pollution/compliance-industrial-commercial-and-institutional-area-source>.

1. Boiler Tune-Up Program

- a. A boiler tune-up program shall be implemented. [40 C.F.R. § 63.11223]

Note: New sources that have applicable work practice standards or management practices are not required to complete an initial performance tune-up. [40 C.F.R. § 63.11210(g)] Per EPA, if the regular tune-up is their only requirement, new boilers are not required to submit a Notice of Compliance Status (NOCS).

- b. Tune-ups shall be conducted at a frequency specified by the rule and based on the size, age, and operations of the boiler. See chart below:

<b>Boiler Category</b>	<b>Tune-Up Frequency</b>
Existing Boilers #1 and #2	Every 5 years
Boilers #1 and #2	Every 2 years

[40 C.F.R. § 63.11223(a) and Table 2]

- c. The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:
- (i) 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 for up to 72 months from the previous inspection for Existing Boilers #1 and #2. Delay of the burner inspection until the next scheduled shutdown is permitted for up to 36 months from the previous inspection for Boilers #1 and #2. [40 C.F.R. § 63.11223(b)(1)]
  - (ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 C.F.R. § 63.11223(b)(2)]
  - (iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for Existing Boilers #1 and #2. Delay of the inspection until the next scheduled shutdown is permitted for up to 36 months from the previous inspection for Boilers #1 and #2. [40 C.F.R. § 63.11223(b)(3)]
  - (iv) Optimize total emissions of CO, consistent with manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]
  - (v) Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 C.F.R. § 63.11223(b)(5)]

(vi) If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up. [40 C.F.R. § 63.11223(b)(7)]

- d. Tune-Up Report: A tune-up report shall be maintained onsite and submitted to the Department and/or EPA upon request. The report shall contain the following information:
- (i) The concentration of CO in the effluent stream (ppmv) and oxygen (volume percent) measured at high fire or typical operating load both **before** and **after** the boiler tune-up;
  - (ii) A description of any corrective actions taken as part of the tune-up of the boiler; and
  - (iii) The types and amounts of fuels used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. [40 C.F.R. § 63.11223(b)(6)]

## 2. Compliance Report

While the Existing Boilers are in operation, a compliance report shall be prepared by March 1<sup>st</sup> every five years which covers the previous five calendar years. When Boilers #1 and #2 have replaced Existing Boilers #1 and #2, a compliance report shall be prepared by March 1<sup>st</sup> biennially which covers the previous two calendar years. The report shall be maintained by the source and submitted to the Department and/or to the EPA upon request. The report must include the items contained in §§ 63.11225(b)(1) and (2), including the following: [40 C.F.R. § 63.11225(b)]

- a. Company name and address;
- b. A statement of whether the source has complied with all the relevant requirements of this Subpart;
- c. A statement certifying truth, accuracy, and completeness of the notification and signed by a responsible official and containing the official's name, title, phone number, email address, and signature;
- d. The following certifications, as applicable:
  - (i) "This facility complies with the requirements in 40 C.F.R. § 63.11223 to conduct tune-ups of each boiler in accordance with the frequency specified in this Subpart."
  - (ii) "No secondary materials that are solid waste were combusted in any affected unit."
  - (iii) "This facility complies with the requirement in §§ 63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available."

3. Recordkeeping

Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart JJJJJ including the following [40 C.F.R. § 63.11225(c)]:

- a. Copies of notifications and reports with supporting compliance documentation;
- b. 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;
- c. Records of the occurrence and duration of each malfunction of each applicable boiler; and
- d. Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler.

Records shall be in a form suitable and readily available for expeditious review. Each record must be kept for 5 years following the date of each recorded action. Each record must be kept on-site or be accessible from a central location by computer or other means that instantly provides access at the site for at least 2 years after the date of each recorded action. The records may be maintained off-site for the remaining 3 years. [40 C.F.R. § 63.11225(d)] Note: Standard Condition (8) of this license requires all records be retained for six years; therefore, the five-year record retention requirement of Subpart JJJJJ shall be streamlined to the more stringent six-year requirement.

E. Emergency Generator #1

MDI Hospital operates one emergency generator denoted as Generator #1. The stationary electric generator is a Kohler Model 800REOZMD equipped with a distillate fuel-fired engine rated at 8.6 MMBtu/hr. The generator has a maximum electrical output rating of 810 kilowatts. Generator #1 was manufactured and installed in 2018.

1. BACT Findings

MDI Hospital submitted a BACT analysis for control of emissions from Generator #1.

a. Particulate Matter (PM, PM<sub>10</sub>, PM<sub>2.5</sub>)

Particulate matter emissions from emergency generators of this size are generally controlled through engine design and proper operation. MDI Hospital proposes as BACT an engine design that complies with Subpart IIII and proper operation of the Generator #1.

BACT for PM/PM<sub>10</sub>/PM<sub>2.5</sub> emissions from Generator #1 is the emission limits listed in the tables below.

b. SO<sub>2</sub>

The operation of Generator #1 will meet the criteria for emergency use as defined in Subpart IIII. These criteria include a 100-hour per year limit on non-emergency

operations. MDI Hospital proposed as BACT for SO<sub>2</sub> the use of ultra-low sulfur distillate fuel.

BACT for SO<sub>2</sub> emissions from Generator #1 is the use of ultra-low sulfur distillate fuel and the emission limits listed in the tables below.

c. NO<sub>x</sub>, CO, and VOC

The generator's engine is a compression-ignition engine. Emissions of NO<sub>x</sub>, CO, and VOC from these types of engines are typically controlled using proper engine design and operating practices. The Hospital proposes as BACT for NO<sub>x</sub>, CO, and VOC emissions the use of an engine certified to meet the applicable emissions standards contained in Subpart III.

The BACT emission limits for Generator #1 are based on the following:

- PM/PM<sub>10</sub>/PM<sub>2.5</sub> – 0.12 lb/MMBtu from 06-096 C.M.R. ch. 103
- SO<sub>2</sub> – Combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
- NO<sub>x</sub> – 3.2 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96
- CO – 0.85 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96
- VOC – 0.09 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96
- Visible Emissions – 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Generator #1 are the following:

Unit	Pollutant	lb/MMBtu
Generator #1	PM	0.12

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	PM <sub>2.5</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	1.03	1.03	1.03	0.01	27.46	7.29	0.77

Visible emissions from Generator #1 shall not exceed 20% opacity on a six-minute block average basis.

MDI Hospital shall maintain records of all maintenance and repairs conducted on Generator #1.

2. Chapter 169

Generator #1 was installed prior to the effective date of *Stationary Generators*, 06-096 C.M.R. ch. 169 and is therefore exempt from this rule pursuant to section 1.

3. New Source Performance Standards

*Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, 40 C.F.R. Part 60, Subpart IIII is applicable to Generator #1 since the unit was ordered after July 11, 2005, and manufactured after April 1, 2006. [40 C.F.R. § 60.4200] By meeting the requirements of 40 C.F.R. Part 60, Subpart IIII, the unit also meets the requirements found in the *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 C.F.R. Part 63, Subpart ZZZZ. [40 C.F.R. § 63.6590(c)]

A summary of the currently applicable federal 40 C.F.R. Part 60, Subpart IIII requirements is listed below.

a. Emergency Engine Designation and Operating Criteria

Under 40 C.F.R. Part 60, Subpart IIII, a stationary reciprocating internal combustion engine (ICE) is considered an **emergency** stationary ICE (emergency engine) as long as the engine is operated in accordance with the following criteria. Operation of an engine outside of the criteria specified below may cause the engine to no longer be considered an emergency engine under 40 C.F.R. Part 60, Subpart IIII, resulting in the engine being subject to requirements applicable to **non-emergency** engines.

(1) Emergency Situation Operation (On-Site)

**There is no operating time limit on the use of an emergency engine to provide electrical power or mechanical work during an emergency situation.** Examples of use of an emergency engine during emergency situations include the following:

- Use of an engine to produce power for critical networks or equipment (including power supplied to portions of a facility) because of failure or interruption of electric power from the local utility (or the normal power source, if the facility runs on its own power production);
- Use of an engine to mitigate an on-site disaster;
- Use of an engine to pump water in the case of fire, flood, natural disaster, or severe weather conditions; and
- Similar instances.

(2) Non-Emergency Situation Operation

An emergency engine may be operated up to a maximum of 100 hours per calendar year for maintenance checks, readiness testing, and other non-emergency situations as described below.

- (i) An emergency engine may be operated for a maximum of 100 hours per calendar year for maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government; the manufacturer; the vendor; the regional transmission organization or equivalent balancing authority and transmission operator; or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE more than 100 hours per calendar year.
- (ii) An emergency engine may be operated for up to 50 hours per calendar year for other non-emergency situations. **However, these operating hours are counted as part of the 100 hours per calendar year operating limit described in paragraph (2) and (2) (i) above.**

The 50 hours per calendar year operating limit for other non-emergency situations cannot be used for peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

[40 C.F.R. §§ 60.4211(f) and 60.4219]

b. 40 C.F.R. Part 60, Subpart III Requirements

(1) Manufacturer Certification Requirement

The engine shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in 40 C.F.R. § 60.4202. [40 C.F.R. § 60.4205(b)] The EPA certification supplied by the manufacturer is in the facility's air license file.

(2) Ultra-Low Sulfur Fuel Requirement

The fuel fired in the engine shall not exceed 15 ppm sulfur (0.0015% sulfur). [40 C.F.R. § 60.4207(b)]

(3) Non-Resettable Hour Meter Requirement

A non-resettable hour meter shall be installed and operated on the engine. [40 C.F.R. § 60.4209(a)]

(4) Operation and Maintenance Requirements

The engine shall be operated and maintained according to the manufacturer's emission-related written instructions. MDI Hospital may only change those emission-related settings that are permitted by the manufacturer. [40 C.F.R. § 60.4211(a)]

MDI Hospital shall have available for review by the Department a copy of the manufacturer's emission-related written instructions for engine operation and maintenance. [06-096 C.M.R. ch. 115, BPT]

(5) Annual Time Limit for Maintenance and Testing

As an emergency engine, the unit shall be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity). [40 C.F.R. § 60.4211(f)]

(6) Initial Notification Requirement

No initial notification is required under 40 C.F.R. Part 60, Subpart IIII for emergency engines. [40 C.F.R. § 60.4214(b)]

(7) Recordkeeping

MDI Hospital shall keep records that include the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the number of hours the unit operated for emergency purposes, the number of hours the unit operated for non-emergency purposes, and the reason the engine was in operation during each time. [40 C.F.R. § 60.4214(b)]

F. Annual Emissions

The table below provides an estimate of facility-wide annual emissions for the purposes of calculating the facility's annual air license fee and establishing the facility's potential to emit (PTE). Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, unquantifiable fugitive particulate matter emissions are not included except when required by state or federal regulations. The estimate does not include the estimated annual emissions from Existing Boilers #1 and #2, because the boilers are expected to be shut down soon after the new Boilers #1 and #2 are installed and running. The proposed boilers also have higher estimated annual emissions than that of the existing boilers. Maximum potential emissions were calculated based on the following assumptions:

- Operating the new Boilers #1 and #2 for 8,760 hr/yr; and
- Operating Generator #1 for 100 hr/yr.

This information does not represent a comprehensive list of license restrictions or permissions. That information is provided in the Order section of this license.



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

	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Boilers	4.3	4.3	4.3	0.1	6.2	2.1	0.4
Generator #1	0.1	0.1	0.1	--	1.4	0.4	--
<b>Total TPY</b>	<b>4.4</b>	<b>4.4</b>	<b>4.4</b>	<b>0.1</b>	<b>7.6</b>	<b>2.5</b>	<b>0.4</b>

Pollutant	Tons/year
Single HAP	9.9
Total HAP	24.9

### III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source is determined by the Department on a case-by case basis. In accordance with 06-096 C.M.R. ch. 115, an ambient air quality impact analysis is not required for a minor source if the total licensed annual emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

Pollutant	Tons/Year
PM <sub>10</sub>	25
PM <sub>2.5</sub>	15
SO <sub>2</sub>	50
NO <sub>x</sub>	50
CO	250

The total licensed annual emissions for the facility are below the emission levels contained in the table above and there are no extenuating circumstances; therefore, an ambient air quality impact analysis is not required as part of this license.

This determination is based on information provided by the applicant regarding the expected construction and operation of the proposed emission units. If the Department determines that any parameter (e.g., stack size, configuration, flow rate, emission rates, nearby structures, etc.) deviates from what was included in the application, the Department may require MDI Hospital to submit additional information and may require an ambient air quality impact analysis at that time.

**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-1170-71-A-N subject to the following conditions.

Severability. The invalidity or unenforceability of any provision of this License or part thereof 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. § 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 C.M.R. ch. 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 C.M.R. ch. 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 C.M.R. ch. 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S. § 353-A. [06-096 C.M.R. ch. 115]

- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 C.M.R. ch. 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 C.M.R. ch. 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 C.M.R. ch. 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 C.M.R. ch. 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 C.M.R. ch. 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 C.F.R. 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 C.F.R. 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 C.M.R. ch. 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 the written test report by the Department, or another alternative timeframe approved by the Department, 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 C.F.R. 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 C.M.R. ch. 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 license requirement. [06-096 C.M.R. ch. 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 emissions 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 C.M.R. ch. 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 C.M.R. ch. 115]

- (16) The licensee 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. § 605). [06-096 C.M.R. ch. 115]

**SPECIFIC CONDITIONS**

**(17) Existing Boilers #1 and #2**

A. Fuel

1. The facility shall not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm). [06-096 C.M.R. ch. 115, BACT]
2. Compliance shall be demonstrated by fuel records showing the percent sulfur of the fuel delivered or fuel used. Fuel sulfur content compliance shall be demonstrated by fuel delivery receipts from the supplier, a statement from the supplier that the fuel delivered meets Maine's fuel sulfur content standards, certificate of analysis, or testing of the tank containing the fuel to be fired. [06-096 C.M.R. ch. 115, BACT]

B. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Existing Boiler #1	PM	0.08	06-096 C.M.R. ch. 115, BACT

C. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BACT]:

Emission Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	PM <sub>2.5</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Existing Boiler #1	0.33	0.33	0.33	0.01	0.60	0.15	0.01
Existing Boiler #2	0.20	0.20	0.20	0.004	0.36	0.09	0.01

D. Visible emissions from Stack #1 shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

E. MDI Hospital shall comply with all requirements of 40 C.F.R. Part 63, Subpart JJJJJ applicable to Existing Boilers #1 and #2 including, but not limited to, the following: [incorporated under 06-096 C.M.R. ch. 115, BACT]

1. The facility shall implement a boiler tune-up program. [40 C.F.R. § 63.11223]
  - a. A tune-up on each boiler shall be conducted every five years. [40 C.F.R. § 63.11223(a) and Table 2]

- 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 for up to 72 months from the previous inspection. [40 C.F.R. § 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 C.F.R. § 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. Delay of the inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection. [40 C.F.R. § 63.11223(b)(3)]
    - (4) Optimize total emissions of CO, consistent with manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]
    - (5) Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 C.F.R. § 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 30 days of start-up. [40 C.F.R. § 63.11223(b)(7)]
  
  - c. Tune-Up Report: A tune-up report shall be maintained onsite and submitted to the Department and EPA upon request. The report shall contain the following information:
    - (1) The concentration of CO in the effluent stream (ppmv) and oxygen (volume percent) measured at high fire or typical operating load both **before** and **after** the boiler tune-up;
    - (2) A description of any corrective actions taken as part of the tune-up of the boiler; and
    - (3) The types and amounts of fuels used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. [40 C.F.R. § 63.11223(b)(6)]
2. Compliance Report
- A compliance report shall be prepared by March 1<sup>st</sup> every five years which covers the previous five calendar years. The report shall be maintained by the source and submitted to the Department and/or to the EPA upon request. The report must include the items contained in §§ 63.11225(b)(1) and (2), including the following: [40 C.F.R. § 63.11225(b)]

- a. Company name and address;
  - b. A statement of whether the source has complied with all the relevant requirements of this Subpart;
  - c. A statement certifying truth, accuracy, and completeness of the notification and signed by a responsible official and containing the official's name, title, phone number, email address, and signature;
  - d. The following certifications, as applicable:
    - (1) "This facility complies with the requirements in 40 C.F.R. § 63.11223 to conduct tune-ups of each boiler in accordance with the frequency specified in this Subpart."
    - (2) "No secondary materials that are solid waste were combusted in any affected unit."
    - (3) "This facility complies with the requirement in §§ 63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available."
3. Recordkeeping
- a. Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart JJJJJJ including the following [40 C.F.R. § 63.11225(c)]:
    - (1) Copies of notifications and reports with supporting compliance documentation;
    - (2) 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;
    - (3) Records of the occurrence and duration of each malfunction of each applicable boiler; and
    - (4) Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler.
  - b. Records shall be in a form suitable and readily available for expeditious review. Each record must be kept for 5 years following the date of each recorded action. Each record must be kept on-site or be accessible from a central location by computer or other means that instantly provides access at the site for at least 2 years after the date of each recorded action. The records may be maintained off-site for the remaining 3 years. [40 C.F.R. § 63.11225(d)] Note: Standard Condition (8) of this license requires all records be retained for six years; therefore, the five-year record retention requirement of Subpart JJJJJJ shall be streamlined to the more stringent six-year requirement.

(18) **Boilers #1 and #2**

A. MDI Hospital shall permanently shut down Existing Boilers #1 and #2 upon completion of commissioning of the new Boilers #1 and #2, not to exceed 90 days after initial startup of Boilers #1 and #2.

B. Fuel

1. Boilers #1 and #2 are licensed to fire both distillate fuel and LPG.
2. The facility shall not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm). [06-096 C.M.R. ch. 115, BACT]
3. Compliance shall be demonstrated by fuel records showing the type, and the percent sulfur of the fuel delivered, or fuel used (if applicable). Fuel sulfur content compliance shall be demonstrated by fuel delivery receipts from the supplier, a statement from the supplier that the fuel delivered meets Maine’s fuel sulfur content standards, certificate of analysis, or testing of the tank containing the fuel to be fired. [06-096 C.M.R. ch. 115, BACT]

C. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #1 <i>LPG</i>	PM	0.05	06-096 C.M.R. ch. 115, BACT
Boiler #2 <i>LPG</i>	PM	0.05	06-096 C.M.R. ch. 115, BACT
Boiler #1 <i>distillate fuel</i>	PM	0.08	06-096 C.M.R. ch. 115, BACT
Boiler #2 <i>distillate fuel</i>	PM	0.08	06-096 C.M.R. ch. 115, BACT

D. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BACT]:

Emission Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	PM <sub>2.5</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1 <i>LPG</i>	0.31	0.31	0.31	0.007	0.31	0.25	0.05
Boiler #2 <i>LPG</i>	0.31	0.31	0.31	0.007	0.31	0.25	0.05
Boiler #1 <i>distillate fuel</i>	0.49	0.49	0.49	0.01	0.70	0.24	0.01
Boiler #2 <i>distillate fuel</i>	0.49	0.49	0.49	0.01	0.70	0.24	0.01



E. Visible Emissions

Visible emissions from Stack #2 shall not exceed 20% opacity on a six-minute block average basis when distillate fuel is being fired in either boiler. [06-096 C.M.R. ch. 115, BACT]

Visible emissions from Stack #2 shall not exceed 10% opacity on a six-minute block average basis when propane is the only fuel being fired in the boilers. [06-096 C.M.R. ch. 115, BACT]

F. MDI Hospital shall comply with all requirements of 40 C.F.R. Part 63, Subpart JJJJJ applicable to Boilers #1 and #2 including, but not limited to, the following: [incorporated under 06-096 C.M.R. ch. 115, BACT]

1. The facility shall implement a boiler tune-up program. [40 C.F.R. § 63.11223]
  - a. A tune-up shall be conducted on each boiler every two years. [40 C.F.R. § 63.11223(a) and Table 2]
  - 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, not to exceed 36 months from the previous inspection. [40 C.F.R. § 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 C.F.R. § 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. Delay of the inspection until the next scheduled shutdown is permitted, not to exceed 36 months from the previous inspection. [40 C.F.R. § 63.11223(b)(3)]
    - (4) Optimize total emissions of CO, consistent with manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]
    - (5) Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 C.F.R. § 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 30 days of start-up. [40 C.F.R. § 63.11223(b)(7)]

- c. Tune-Up Report: A tune-up report shall be maintained onsite and submitted to the Department and EPA upon request. The report shall contain the following information:
- (1) The concentration of CO in the effluent stream (ppmv) and oxygen (volume percent) measured at high fire or typical operating load both **before** and **after** the boiler tune-up;
  - (2) A description of any corrective actions taken as part of the tune-up of the boiler; and
  - (3) The types and amounts of fuels used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. [40 C.F.R. § 63.11223(b)(6)]

2. Compliance Report

A compliance report shall be prepared by March 1<sup>st</sup> biennially which covers the previous two calendar years. The report shall be maintained by the source and submitted to the Department and/or to the EPA upon request. The report must include the items contained in §§ 63.11225(b)(1) and (2), including the following: [40 C.F.R. § 63.11225(b)]

- a. Company name and address;
- b. A statement of whether the source has complied with all the relevant requirements of this Subpart;
- c. A statement certifying truth, accuracy, and completeness of the notification and signed by a responsible official and containing the official's name, title, phone number, email address, and signature;
- d. The following certifications, as applicable:
  - (1) "This facility complies with the requirements in 40 C.F.R. § 63.11223 to conduct tune-ups of each boiler in accordance with the frequency specified in this Subpart."
  - (2) "No secondary materials that are solid waste were combusted in any affected unit."
  - (3) "This facility complies with the requirement in §§ 63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available."

3. Recordkeeping

- a. Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart JJJJJ including the following [40 C.F.R. § 63.11225(c)]:
  - (1) Copies of notifications and reports with supporting compliance documentation;
  - (2) 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;
  - (3) Records of the occurrence and duration of each malfunction of each applicable boiler; and
  - (4) Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler.
- b. Records shall be in a form suitable and readily available for expeditious review. Each record must be kept for 5 years following the date of each recorded action. Each record must be kept on-site or be accessible from a central location by computer or other means that instantly provides access at the site for at least 2 years after the date of each recorded action. The records may be maintained off-site for the remaining 3 years. [40 C.F.R. § 63.11225(d)]  
Note: Standard Condition (8) of this license requires all records be retained for six years; therefore, the five-year record retention requirement of Subpart JJJJJ shall be streamlined to the more stringent six-year requirement.

(19) **Emergency Generator #1**

- A. MDI Hospital shall keep records of all maintenance conducted on the engine associated with Generator #1. [06-096 C.M.R. ch. 115, BACT]
- B. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Generator #1	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)

- C. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BACT]:

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	PM <sub>2.5</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	1.03	1.03	1.03	0.01	27.46	7.29	0.77

- D. Visible Emissions

Visible emissions from the emergency generator shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

- E. Generator #1 shall meet the applicable requirements of 40 C.F.R. Part 60, Subpart III, including the following: [incorporated under 06-096 C.M.R. ch. 115, BACT]
1. **Manufacturer Certification**  
The engine shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in § 60.4202. [40 C.F.R. § 60.4205(b)] The EPA certification supplied by the manufacturer is in the facility's air license file.
  2. **Ultra-Low Sulfur Fuel**  
The fuel fired in the engine shall not exceed 15 ppm sulfur (0.0015% sulfur). Compliance with the fuel sulfur content limit shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, a statement from the supplier that the fuel delivered meets Maine's fuel sulfur content standards, certificate of analysis, or testing of the tank containing the fuel to be fired. [40 C.F.R. § 60.4207(b) and 06-096 C.M.R. ch. 115, BACT]
  3. **Non-Resettable Hour Meter**  
A non-resettable hour meter shall be installed and operated on the engine. [40 C.F.R. § 60.4209(a)]
  4. **Annual Time Limit for Maintenance and Testing**
    - a. As an emergency engine, the unit shall be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity). These limits are based on a calendar year. Compliance shall be demonstrated by records (electronic or written log) of all engine operating hours. [40 C.F.R. § 60.4211(f) and 06-096 C.M.R. ch. 115, BACT]
    - b. MDI Hospital shall keep records that include the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the number of hours the unit operated for emergency purposes, the number of hours the unit operated for non-emergency purposes, and the reason the engine was in operation during each time. [40 C.F.R. § 60.4214(b)]
  5. **Operation and Maintenance**  
The engine shall be operated and maintained according to the manufacturer's emission-related written instructions. MDI Hospital may only change those emission-related settings that are permitted by the manufacturer. [40 C.F.R. § 60.4211(a)]

MDI Hospital shall have available for review by the Department a copy of the manufacturer's emission-related written instructions for engine operation and maintenance. [06-096 C.M.R. ch. 115, BPT]

- (20) If the Department determines that any parameter value pertaining to construction and operation of the proposed emissions units, including but not limited to stack size, configuration, flow rate, emission rates, nearby structures, etc., deviates from what was submitted in the application or ambient air quality impact analysis for this air emission license, MDI Hospital may be required to submit additional information. Upon written request from the Department, MDI Hospital shall provide information necessary to demonstrate AAQS will not be exceeded, potentially including submission of an ambient air quality impact analysis or an application to amend this air emission license to resolve any deficiencies and ensure compliance with AAQS. Submission of this information is due within 60 days of the Department's written request unless otherwise stated in the Department's letter. [06-096 C.M.R. ch. 115, § 2(O)]

DONE AND DATED IN AUGUSTA, MAINE THIS 2<sup>nd</sup> DAY OF OCTOBER, 2023.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:  for  
MELANIE LOYZIM, COMMISSIONER

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

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

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: June 22, 2023

Date of application acceptance: June 23, 2023

Date filed with the Board of Environmental Protection:

This Order prepared by Kendra Nash, Bureau of Air Quality.

