



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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State of Maine,
Office of Information Technology
Kennebec
Augusta, Maine
A-1070-71-A-N (SM)

Departmental
Findings of Fact and Order
Air Emission License
New

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., §344 and §590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

State of Maine, Office of Information Technology (OIT) has applied for a new Air Emission License permitting the operation of emission sources associated with their Augusta facility.

B. Emission Equipment

The following equipment is addressed in this air emission license and is located at 127 Sewell Street, Augusta, Maine:

Generator

<u>Equipment</u>	<u>Horse Power (KW)</u>	<u>Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Install. Date</u>	<u>Stack #</u>
Emergency Generator #1	1000	72	Diesel fuel, 0.0015 %	2012	1

OIT is installing an emergency generator at the Sewall Street location to provide emergency power to the State of Maine computer systems. OIT is purchasing a Kohler Power Systems, 1000 kW, 60 Hz, generator, with a displacement less than 10 liters/cylinder (Model 1000REOZDE). The unit will be Tier 2 certified.

C. Application Classification

OIT is classified as a new source applying for its first air emission license. A new source is considered a major source based on whether or not expected emissions

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exceed the "Significant Emission Levels" as defined in the Department's regulations. The emissions for the new source are determined by the maximum future license allowed emissions, as follows:

Pollutant	Max. Future License (TPY)	Sig. Level
PM	0.29	100
PM ₁₀	0.29	100
SO ₂	0.01	100
NO _x	7.81	100
CO	2.07	100
VOC	0.22	50

The Department has determined the facility to be a minor source and the application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended). With a limit on the operating hours restriction of 500 hours on the emergency generator, the facility is licensed below the major source thresholds and is considered a synthetic minor.

D. Regulatory Review

Provided in this section is a summary of the State and Federal air regulations that apply to the new emission source at OIT. The facility currently utilizes and has selected specific equipment that will achieve compliance with the following State and Federal air regulations.

06-096 CMR 101 Visible Emission Regulation

This rule establishes opacity limitations for emissions from several categories of air contaminant sources. The generator is subject to Section (2)(B)(1)(d), which limits visible emissions from any stationary internal combustion engine manufactured after the year 2000 to an opacity of 20 percent on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a 3-hour period.

06-096 CMR 106 Low Sulfur Fuel Regulation

This rule establishes the maximum sulfur content of fossil fuels allowed to be burned in various air quality control regions in the state unless the source is equipped with SO₂ controls or is subject to more stringent sulfur limitations by other requirements. OIT is subject to this rule because the generator will burn a liquid fossil fuel. As such, OIT is limited to a fuel sulfur content of 2.0% by weight

in its liquid fossil fuels; however, the BACT analysis has required a more stringent limit.

06-096 CMR 115 Major and Minor Source Air Emission License Regulations

This rule specifies who must obtain an air emission license, describes the information an applicant must submit for a license, and describes the standards and criteria that must be complied with during and following the air licensing process. For minor sources such as OIT, 06-096 CMR 115 (as amended) serves as an operating licensing program and a pre-construction license review program.

Federal Air Regulations

New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart IIII – 40 CFR 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* is applicable to generators ordered after July 11, 2005 and manufactured after April 1, 2006. OIT is subject to this federal regulation, the requirements of which are described in (Best Practical Treatment Analysis) Section II B.

National Emissions Standards for Hazardous Air Pollutants (NESHAP)

40 CFR Part 63 Subpart ZZZZ - 40 CFR Part 63, Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines* is not applicable to OIT's emergency generator. The unit is considered to be an existing, emergency stationary reciprocating internal combustion engines at an area HAP source; however, it is considered exempt from the requirements of Subpart ZZZZ since it is categorized as an institutional emergency engine.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 CMR 100 (as amended). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in *Definitions Regulation*, 06-096 CMR 100 (as amended). BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Emergency Generator #1

OIT operates one emergency generator. The emergency generator is rated at 1000 kW (9.76 MMBtu/hr) and fires diesel. The generator was manufactured in 2012.

1. BACT/BPT Findings

The BACT/BPT emission limits for the generator are based on the following:

Diesel

PM/PM₁₀ – 0.12 lb/MMBtu based on 06-096 CMR 103

SO₂ – based on firing 0.0015% sulfur, 0.002 lb/MMBtu

NO_x – 3.2 lb/MMBtu, AP-42, Table 3.4-1 (dated 10/96)

CO – 0.85 lb/MMBtu, AP-42, Table 3.4-1 (dated 10/96)

VOC – 0.09 lb/MMBtu, AP-42, Table 3.4-1 (dated 10/96)

Opacity – Visible emissions from Emergency Generator #1 shall not exceed 20% opacity on a (6) six minute block average, except for no more than two (2) six (6) minute block averages in a 3 hour period.

<u>Unit</u>	<u>PM</u> <u>(lb/hr)</u>	<u>PM₁₀</u> <u>(lb/hr)</u>	<u>SO₂</u> <u>(lb/hr)</u>	<u>NO_x</u> <u>(lb/hr)</u>	<u>CO</u> <u>(lb/hr)</u>	<u>VOC</u> <u>(lb/hr)</u>
Emergency Generator # 1 (9.76 MMBtu/hr) diesel, 0.0015% S	1.2	1.2	0.02	31.23	8.30	0.88

The emergency generator shall be limited to 500 hours of operation a year, based on a calendar year total basis. OIT shall keep records of the hours of operation for each 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 OIT that are approved by the engine manufacturer. OIT 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 emergency engines. [40 CFR §60.4214(b)]

C. Annual Emissions

1. Total Annual Emissions

OIT shall be restricted to the following annual emissions, based on a calendar year. The tons per year limits were calculated based on 500 hrs/yr for the generator:

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
Generator #1	0.29	0.29	0.01	7.81	2.07	0.22
Total TPY	0.29	0.29	0.01	7.81	2.07	0.22

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, OIT 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 minor new source shall be determined on a case-by case basis. Based on the information available in the file and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source.

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-1070-71-A-N(SM) 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) **Emergency Generator #1**

A. The generator is limited to 500 hours per year total operation, based on a calendar year total. Compliance shall be demonstrated by a written log of all generator operating hours. [06-096 CMR 115]

B. Emissions shall not exceed the following:

<u>Unit</u>	<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>Origin and Authority</u>
Emergency Generator #1	PM	0.12	06-096 CMR 103(2)(B)(1)(a)

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

<u>Unit</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>
Emergency Generator #1 (9.76 MMBtu/hr), diesel	1.2	1.2	0.02	31.23	8.3	0.88

D. Visible emissions from the diesel generator shall each not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 101]

E. Emergency Generator #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 operated and maintained according to the manufacturer's emission-related written instructions or procedures

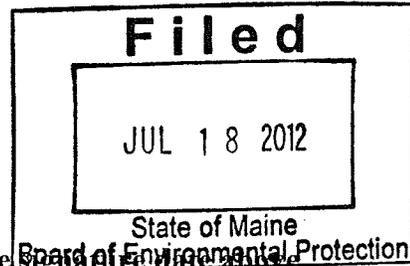
developed by OIT that are approved by the engine manufacturer. OIT may only change those emission-related settings that are permitted by the manufacturer. [40 CFR §60.4211(a)]

5. 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 all generator operating hours. [40 CFR §60.4211(f) and 06-096 CMR 115]
- (17) OIT 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 17th DAY OF July, 2012.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Melania S. Bristow
PATRICIA W. AHO, COMMISSIONER



The term of this license shall be five (5) years from the ~~beginning of the term~~ beginning of the term.

[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: 5/18/2012
Date of application acceptance: 5/24/2012

Date filed with the Board of Environmental Protection:

This Order prepared by Lisa P. Higgins, Bureau of Air Quality.