



DEPARTMENT ORDER

**Portsmouth Naval Shipyard  
York County  
Kittery, Maine  
A-452-77-18-A**

**Departmental  
Findings of Fact and Order  
New Source Review  
NSR #18**

**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 (the Department) finds the following facts:

**I. REGISTRATION**

A. Introduction

FACILITY	Portsmouth Naval Shipyard (PNS)
LICENSE TYPE	06-096 C.M.R. ch. 115, Minor Modification
NAICS CODES	336611 (Ship Building and Repairing)
NATURE OF BUSINESS	National Security (Submarine repair for U.S. Navy)
FACILITY LOCATION	Kittery

B. NSR License Description

Portsmouth Naval Shipyard (PNS) has requested a New Source Review (NSR) license for the installation of two 1500 kW units, four 1000 kW units, and one 250 kW unit. All the units are Caterpillar distillate fuel-fired emergency generators (G46 through G52). The units are being installed to provide redundancy and power reliability in the event of a power outage.

C. Emission Equipment

The following equipment is addressed in this NSR license:

**Generators/Engines**

Equipment	Max. Heat Input Capacity (MMBtu/hr)	Max. Firing Rate (gal/hr)	Output	Fuel Type, % sulfur	Mfr. Date	Install Date
G46, emergency generator	14.35	104.8	1,500 kW	Distillate Fuel, 0.0015%	2023	2023
G47, emergency generator	14.35	104.8	1,500 kW		2023	2023
G48, emergency generator	9.85	71.9	1,000 kW		2023	2023
G49, emergency generator	9.85	71.9	1,000 kW		2023	2023
G50, emergency generator	9.85	71.9	1,000 kW		2023	2023
G51, emergency generator	9.85	71.9	1,000 kW		2023	2023
G52, emergency generator	2.65	19.4	250 kW		2023	2023

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.

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 issued date of this license.

The application for seven Emergency Generators (G46 through G52) does not violate any applicable federal or state requirements and does not reduce monitoring, reporting, testing, or recordkeeping requirements.

The modification of a major source is considered a major or minor modification based on whether or not expected emissions increases exceed the “Significant Emission Increase” levels as given in *Definitions Regulation*, 06-096 Code of Maine Rules (C.M.R.) ch. 100.

For a major stationary source, the expected emissions increase from each new, modified, or affected unit may be calculated as equal to the difference between the post-modification projected actual emissions and the baseline actual emissions for each NSR regulated pollutant.

1. Baseline Actual Emissions

Baseline actual emissions (BAE) for existing affected emission units are equal to the average annual emissions from any consecutive 24-month period within the ten years prior to submittal of a complete license application. The selected 24-month baseline period can differ on a pollutant-by-pollutant basis. However, there are no existing emission units which are considered “affected” by this project.

The only equipment addressed by this license are new emission units. Baseline actual emissions for new equipment are considered to be zero for all pollutants; therefore, the selection of a baseline year is unnecessary.

2. Projected Actual Emissions

New emission units must use potential to emit (PTE) emissions for projected actual emissions (PAE). Those emissions are presented in the following table.

**Projected Actual Emissions**

<b>Equipment</b>	<b>PM (tpy)</b>	<b>PM<sub>10</sub> (tpy)</b>	<b>PM<sub>2.5</sub> (tpy)</b>	<b>SO<sub>2</sub> (tpy)</b>	<b>NO<sub>x</sub> (tpy)</b>	<b>CO (tpy)</b>	<b>VOC (tpy)</b>
Emergency Generator, G46	0.09	0.09	0.09	0.01	1.10	0.10	0.02
Emergency Generator, G47	0.09	0.09	0.09	0.01	1.10	0.10	0.02
Emergency Generator, G48	0.06	0.06	0.06	0.01	0.73	0.02	0.01
Emergency Generator, G49	0.06	0.06	0.06	0.01	0.73	0.02	0.01
Emergency Generator, G50	0.06	0.06	0.06	0.01	0.73	0.02	0.01
Emergency Generator, G51	0.06	0.06	0.06	0.01	0.73	0.02	0.01
Emergency Generator, G52	0.02	0.02	0.02	0.01	0.11	0.02	0.01
<b>Total</b>	<b>0.44</b>	<b>0.44</b>	<b>0.44</b>	<b>0.07</b>	<b>5.23</b>	<b>0.30</b>	<b>0.09</b>

3. Emissions Increases

Emissions increases are calculated by subtracting BAE from the PAE. The emission increase is then compared to the significant emissions increase levels.

Pollutant	Baseline Actual Emissions (ton/year)	Projected Actual Emissions (ton/year)	Emissions Increase (ton/year)	Significant Emissions Increase Levels (ton/year)
PM	0	0.44	0.44	25
PM <sub>10</sub>	0	0.44	0.44	15
PM <sub>2.5</sub>	0	0.44	0.44	10
SO <sub>2</sub>	0	0.07	0.07	40
NO <sub>x</sub>	0	5.23	5.23	40
CO	0	0.30	0.30	100
VOC	0	0.09	0.09	40

4. Classification

Since emissions increases do not exceed significant emissions increase levels, this NSR license is determined to be a minor modification under *Minor and Major Source Air Emission License Regulations*, 06-096 C.M.R. ch. 115. PNS has submitted an application to incorporate the requirements of this NSR license into the facility's Part 70 air emission license.

**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 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 06-096 C.M.R. ch. 100. BACT is a top-down approach to selecting air emission controls considering economic, environmental, and energy impacts.

B. Emergency Generators G46 through G52

PNS has requested to install and operate seven distillate fuel-fired emergency generators. Emergency generators are generator sets with each gen set consisting of an engine and an electrical generator. PNS continues to install emergency generators site-wide to provide redundancy and power reliability in the event of a power outage. Emergency Generators G46, G47, G48, and G49 will provide back up support for submarines while in drydock or pier side. Generators G50, G51, and G52 will be used to support facilities at PNS in the event of a power outage or disruption. Each emergency generator, except for Generator G52, will be powered by a Tier 2 engine. Generator G52 will be powered by a Tier 3 engine. These generators are to be manufactured and installed in 2023.

Four of the new generators will provide backup support for submarines while in dry dock or pier side. If the shipyard were to lose power from the facility's power supplier, only the generators connected to active submarine projects would run simultaneously until either power from the power supplier is restored or the shipyard power plant is brought on-line to take on some of the load. Three generators will be used as back up to support facilities at PNS. There is the potential that a power supplier outage would only affect certain areas of the facility and not the entire location. It is possible that during an outage, not all the generators located at PNS including the new generators, would come online.

The new generators will be tested monthly and will not be tested simultaneously, minimizing potential air quality impacts. In order to comply with 06-096 C.M.R. 169, *Stationary Generators*, the applicable units will each be restricted to 500 hours of operation.

1. BACT Findings

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

PM emissions from distillate fuel-fired engines are generally controlled through proper operation and maintenance. Additionally, these engines will be subject to 40 C.F.R. Part 60, Subpart III, and therefore required to meet EPA emission standards for emergency stationary engines as discussed below. Given the operating hours restrictions included in 40 C.F.R. Part 60, Subpart III, the use of add-on controls for PM is not economically feasible. BACT for PM emissions from Emergency Generators G46 through G52 shall be proper operation and maintenance of the units, installation of EPA certified emergency stationary engines as required in 40 C.F.R. § 60.4205(b), and the emission limits listed in the following tables.

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

For emergency engines that fire distillate fuel and operate for only short periods of time, the use of wet scrubbers or other SO<sub>2</sub> add-on control methods are not economically feasible considering the minimal emissions resulting from the limited use of the engines. The most practical method for limiting SO<sub>2</sub> emissions from such engines is the use of ultra-low sulfur fuel, such as distillate fuel with a sulfur content no greater than 0.0015% by weight. BACT for SO<sub>2</sub> emissions from Emergency Generators G46 through G52 shall be the use of distillate fuel with a sulfur content no greater than 0.0015% by weight, installation of EPA certified emergency stationary engines as required in 40 C.F.R. § 60.4205(b), and the emission limits listed in the following tables.

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

Potentially available control options for reducing emissions of NO<sub>x</sub> from distillate fuel-fired engines include combustion controls, selective catalytic reduction (SCR), and non-selective catalytic reduction (NSCR).

Combustion controls are typically implemented through design features such as electronic engine controls, injection systems, combustion chamber geometry, and turbocharging systems. The engines are equipped with electronic engine controls and is designed to minimize NO<sub>x</sub> emissions but does not include any after treatment devices for NO<sub>x</sub> control. Additional engine modifications such as injection systems or turbo charging systems are not economically feasible for an engine utilized as an emergency back-up engine.

SCR and NSCR are both post-combustion NO<sub>x</sub> reduction technologies. SCR uses ammonia to react with NO<sub>x</sub> in the gas stream in the presence of a catalyst to form nitrogen and water. NSCR uses a catalyst to convert CO, NO<sub>x</sub>, and hydrocarbons into carbon dioxide, nitrogen, and water without the use of an additional reagent, and requires strict air-to-fuel control to maintain high reduction effectiveness without increasing hydrocarbon emissions. For an emergency back-up engine, neither SCR nor NSCR are economically feasible considering the minimal emissions due to the limited use of the engines.

BACT for NO<sub>x</sub> emissions from Emergency Generators G46 through G52 shall be the use of good combustion controls, proper operation and maintenance of the units, installation of EPA certified emergency stationary engines as required in 40 C.F.R. § 60.4205(b), and the emission limits listed in the following tables.

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

CO and VOC emissions are a result of incomplete combustion caused by conditions such as insufficient residence time or limited oxygen availability. CO and VOC emissions from distillate fuel-fired generators are generally controlled through proper operation and maintenance of the units. Oxidation catalysts have been used on large generators to reduce CO and VOC emission levels in the exhaust, but, like SCR and NSCR, use of an oxidation catalyst on an emergency engine with limited yearly use would not provide a significant environmental benefit and is not economically feasible. BACT for CO and VOC emissions from Emergency Generators G46 through G52 shall be proper operation and maintenance of the units, installation of EPA certified emergency stationary engines as required in 40 C.F.R. § 60.4205(b), and the emission limits listed in the tables below.

e. Visible Emissions

BACT for visible emissions from Emergency Generators G46 through G52 shall be as follows:

Visible emissions from each unit shall not exceed 20% opacity on a six-minute block average basis.

f. Fuel Use Restriction

The fuel fired in Emergency Generators G46 through G52 shall be included in the facility's distillate fuel limit of 4,900,000 gallons/year, based on a 12-month rolling total.

g. Emission Limits

The BACT emission limits for Emergency Generators G46 and G47 are based on the following:

- PM/PM<sub>10</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> - 4.97 gr/hp-hr based on manufacturer's specifications
- CO - 0.45 gr/hp-hr based on manufacturer's specifications
- VOC - 0.11 gr/hp-hr based on manufacturer's specifications
- Visible Emissions - 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Emergency Generators G48 through G51 are based on the following:

- PM/PM<sub>10</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> - 4.93 gr/hp-hr based on manufacturer's specifications
- CO - 0.13 gr/hp-hr based on manufacturer's specifications
- VOC - 0.01 gr/hp-hr based on manufacturer's specifications
- Visible Emissions - 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Emergency Generator G52 are based on the following:

- PM/PM<sub>10</sub> - 0.12 lb/MMBtu from 06-096 C.M.R. ch. 115, BACT
- 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> - 2.91 gr/hp-hr based on manufacturer's specifications
- CO - 0.4 gr/hp-hr based on manufacturer's specifications
- VOC - 0.1 gr/hp-hr based on manufacturer's specifications
- Visible Emissions - 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for the Emergency Generators are as follows:

Unit	Pollutant	lb/MMBtu
Emergency Generator, G46	PM	0.12
Emergency Generator, G47	PM	0.12
Emergency Generator, G48	PM	0.12
Emergency Generator, G49	PM	0.12
Emergency Generator, G50	PM	0.12
Emergency Generator, G51	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)
Emergency Generator, G46	1.72	1.72	1.72	0.02	22.02	1.99	0.49
Emergency Generator, G47	1.72	1.72	1.72	0.02	22.02	1.99	0.49
Emergency Generator, G48	1.18	1.18	1.18	0.02	14.56	0.38	0.03
Emergency Generator, G49	1.18	1.18	1.18	0.02	14.56	0.38	0.03



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)
Emergency Generator, G50	1.18	1.18	1.18	0.02	14.56	0.38	0.03
Emergency Generator, G51	1.18	1.18	1.18	0.02	14.56	0.38	0.03
Emergency Generator, G52	0.32	0.32	0.32	0.01	2.15	0.30	0.07

2. Chapter 169

*Stationary Generators*, 06-096 C.M.R. ch. 169 (Chapter 169), is applicable to Emergency Generators G46-G52. Chapter 169 identifies emission standards for generator engines subject to this chapter and stack height requirements for certain generator engines subject to this chapter.

a. Chapter 169 Emission Standards Requirements

For Emergency Generators G46-G51, PNS has elected to comply with the emission standards for emergency generators by accepting a limit on total generator usage (emergency and non-emergency operation combined) of 500 hours/year (12-month rolling total basis) for each unit. Compliance shall be demonstrated through recordkeeping of all generator operating times.

If there are periods of extended outage such as a natural disaster or other similar event outside the control of PNS, PNS may apply for a temporary variance from the Department to exempt specific time periods from the 500 hour/year limit. The Department Commissioner may, without hearing, issue that variance for a period of time not to exceed 30 days if, in their judgement, the variance is necessary to avoid immediate threat to public health, safety, or general welfare or to protect critical infrastructure.

For Generator G52, PNS shall comply with the applicable standards contained in 40 C.F.R. Part 60, Subpart IIII. [06-096 C.M.R. ch. 169, § 4(B)(1)]

b. Chapter 169 Stack Height Requirements

Chapter 169 identifies stack height requirements for any stack used to exhaust a generator engine or combination of generator engines with a combined rated output equal to or greater than 1,000 brake horsepower (747 kW). Individual generator engines with a maximum power capacity of less than 300 kW are not included in the assessment of the combined generator power capacity exhausted through a common stack. [06-096 C.M.R. ch. 169, § 6]

PNS submitted a qualitative ambient impact screening analysis (QAISA) for Generators G46-G51; since G52 is below 300 kW, it was not included in this analysis. The QAISA considered many factors including engine size, emission rates, operational limits, stack height, height of surrounding structures, distance to ambient air, terrain features, and proximity to sensitive receptors. Based on the analysis submitted, the Department finds that the proposed minimum stack height of 13 feet above ground level for Generators G46 and G47 and 9.67 feet above ground level for Generators G48-G51 will not cause or contribute to violations of ambient air quality standards. [06-096 C.M.R. ch. 169, § 6(B)]

3. 40 C.F.R. Part 60, Subpart III

*Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, 40 C.F.R. Part 60, Subpart III is applicable to Emergency Generators G46 through G52 since the units were 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 III, the units also meet 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 III requirements is listed below.

a. Emergency Engine Designation and Operating Criteria

Under 40 C.F.R. Part 60, Subpart III, 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 III, 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 IIII Requirements

(1) Manufacturer Certification Requirement

The engines 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)]

(2) Ultra-Low Sulfur Fuel Requirement

The fuel fired in each 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 each engine.  
[40 C.F.R. § 60.4209(a)]

(4) Operation and Maintenance Requirements

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

(5) Annual Time Limit for Maintenance and Testing

As emergency engines, the units 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

PNS shall keep records that include maintenance conducted on each engine and the hours of operation of each engine recorded through its non-resettable hour meter. Documentation shall include the number of hours the units are operated for emergency purposes, the number of hours each unit is operated for non-emergency purposes, and the reason the engines were in operation during each time. [40 C.F.R. § 60.4214(b)]

(8) Enhanced Engine Operating Hours Monitoring and Recordkeeping

Per agreement with the Department and the EPA, PNS has agreed to the following additional measures to ensure their emergency engines do not operate more than allowed for by Subpart IIII in non-emergency service.

The enhanced monitoring shall include weekly inspections of all emergency engines. Inspections shall include recording the number of hours each emergency engine operated for emergency purposes, the number of hours each engine operated for non-emergency purposes, and the reason each engine was in operation during each time.

In addition to weekly inspections, emergency engines shall be inspected as soon as practicable, but not greater than 8 hours directly following each power outage for which the engine could operate. These inspections are being required to help minimize the amount of time an emergency engine may unintentionally operate

following the end of a power outage and shall include the recording of the date/time the power was restored, the date/time of inspection, and whether the generator was running or not.

C. Incorporation Into the Part 70 Air Emission License

Pursuant to *Part 70 Air Emission License Regulations*, 06-096 C.M.R. ch. 140 § 1(C)(8), for a modification at the facility that has undergone NSR requirements or been processed through 06-096 C.M.R. ch. 115, the source must apply for an amendment to their Part 70 license within one year of commencing the proposed operations, as provided in 40 C.F.R. Part 70.5.

An application to incorporate the requirements of this NSR license into the Part 70 air emission license has been submitted to the Department.

D. Annual Emissions

PNS is currently licensed with facility-wide fuel use limits of 2.26 billion cubic feet of natural gas per year and 4,900,000 gallons of distillate fuel per year, both based on a 12-month rolling total. Neither of these limits nor the licensed annual emissions based on them will change as a result of the installation and operation of Emergency Generators G46 through G52.

III. AMBIENT AIR QUALITY ANALYSIS

PNS previously submitted an ambient air quality impact analysis outlined in air emission license A-452-70-A-I (dated March 1, 2000) demonstrating that emissions from the facility, in conjunction with all other sources, do not violate Ambient Air Quality Standards (AAQS). An additional air quality impact analysis is not required for this NSR license.

## ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants New Source Review License A-452-77-18-A pursuant to the preconstruction licensing requirements of 06-096 C.M.R. ch. 115 and subject to the specific conditions below.

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.

### SPECIFIC CONDITIONS

#### (1) Emergency Generators G46, G47, G48, G49, G50, G51, and G52

- A. PNS is licensed to install and operate Emergency Generators G46, G47, G48, G49, G50, G51, and G52. Emergency Generators G46, G47, G48, G49, G50, and G51 are equipped with Tier 2 certified engines and Emergency Generator G52 is equipped with a Tier 3 certified engine.
- B. Emergency Generators G46, G47, G48, G49, G50, G51, and G52 shall each be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 C.M.R. ch. 115, BACT]
- C. Emergency Generators G46, G47, G48, G49, G50, and G51 shall each be limited to 500 hours per year of operation on a 12-month rolling total basis, including operating hours during emergency situations.

If there are periods of extended outage such as a natural disaster or other similar event outside the control of PNS, PNS may apply to the Department for a temporary variance to exempt specific time periods from this annual hour limit. The Department Commissioner may, without hearing, issue that variance for a period of time not to exceed 30 days if, in his/her judgement, the variance is necessary to avoid immediate threat to public health, safety, or general welfare or to protect critical infrastructure.  
[06-096 C.M.R. ch. 169, § 4(B)(2)(c)]

D. PNS shall keep records of all maintenance conducted on the engines associated with Emergency Generators G46 through G52. [06-096 C.M.R. ch. 115, BACT]

E. Fuel Use Restriction

The fuel fired in Emergency Generators G46, G47, G48, G49, G50, G51, and G52 shall be included in the facility's distillate fuel use limit of 4,900,000 gallons/year, based on a 12-month rolling total.

F. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Emergency Generator, G46	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)
Emergency Generator, G47	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)
Emergency Generator, G48	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)
Emergency Generator, G49	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)
Emergency Generator, G50	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)
Emergency Generator, G51	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)

G. 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)
Emergency Generator, G46	1.72	1.72	1.72	0.02	22.02	1.99	0.49
Emergency Generator, G47	1.72	1.72	1.72	0.02	22.02	1.99	0.49
Emergency Generator, G48	1.18	1.18	1.18	0.02	14.56	0.38	0.03
Emergency Generator, G49	1.18	1.18	1.18	0.02	14.56	0.38	0.03
Emergency Generator, G50	1.18	1.18	1.18	0.02	14.56	0.38	0.03
Emergency Generator, G51	1.18	1.18	1.18	0.02	14.56	0.38	0.03
Emergency Generator, G52	0.32	0.32	0.32	0.01	2.15	0.30	0.07

H. Visible Emissions

Visible emissions from Emergency Generators G46, G47, G48, G49, G50, G51, and G52 shall each not exceed 20% opacity on a six-minute block average basis.  
[06-096 C.M.R. ch. 115, BACT]

I. Emergency Generators G46, G47, G48, G49, G50, G51, and G52 shall meet the applicable requirements of 40 C.F.R. Part 60, Subpart IIII, including the following:

1. Manufacturer Certification

Each 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)]

2. Ultra-Low Sulfur Fuel

The fuel fired in each 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, 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 each engine.  
[40 C.F.R. § 60.4209(a)]

4. Annual Time Limit for Maintenance and Testing

As an emergency engine, each 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]

5. Operation and Maintenance

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



6. Recordkeeping

PNS shall keep records that include maintenance conducted on each engine and the hours of operation of each engine recorded through its 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)]

J. Emergency Engines Enhanced Monitoring and Recordkeeping

The following shall apply to Emergency Generators G46, G47, G48, G49, G50, G51, and G52:

1. Inspections of all emergency engines shall be conducted on a weekly basis.
2. Inspections shall entail the same recordkeeping requirements as required by Subpart III. PNS shall record the number of hours each engine operated for emergency purposes, the number of hours the engine operated for non-emergency purposes, and the reason each engine was in operation during each time.
3. In addition to weekly inspections, emergency engines shall be inspected as soon as practicable, but not greater than 8 hours directly following each power outage for which the engine could operate. These inspections are being required to help minimize the amount of time an emergency engine may unintentionally operate following the end of a power outage and shall include recording of the date/time the power was restored, the date/time of inspection, and whether the generator was running or not.

DONE AND DATED IN AUGUSTA, MAINE THIS 27<sup>th</sup> DAY OF FEBRUARY, 2023.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:  for  
MELANIE LOYZIM, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: October 28, 2022  
Date of application acceptance: October 28, 2022

Date filed with the Board of Environmental Protection:

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

**FILED**  
**FEB 27, 2023**  
**State of Maine**  
**Board of Environmental Protection**