



DEPARTMENT ORDER

**Bucksport Generation LLC
Hancock County
Bucksport, Maine
A-22-77-21-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	Bucksport Generation LLC (Bucksport Generation)
LICENSE TYPE	06-096 C.M.R. ch. 115, Minor Modification
NAICS CODES	221112, Fossil Fuel Electric Power Generation
NATURE OF BUSINESS	Electric Services
FACILITY LOCATION	2 River Road, Bucksport, Maine

B. NSR License Description

Bucksport Generation LLC (Bucksport Generation) has requested a New Source Review (NSR) license to install six, 2-megawatt (MW) black start emergency generators (BSEG) that will be used to restart the facility's combustion turbine in the event of a system wide failure of the electrical grid.

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 (MW)	Fuel Type, % sulfur	Mfr. Date	Install. Date
BSEG #1	19.12	138	2	Distillate Fuel, 0.0015	2018	~2018
BSEG #2	19.12	138	2	Distillate Fuel, 0.0015	2018	~2018
BSEG #3	19.12	138	2	Distillate Fuel, 0.0015	2018	~2018
BSEG #4	19.12	138	2	Distillate Fuel, 0.0015	2018	~2018
BSEG #5	19.12	138	2	Distillate Fuel, 0.0015	2018	~2018
BSEG #6	19.12	138	2	Distillate Fuel, 0.0015	2018	~2018

D. Definitions

Black Start. For the purpose of this license, *black start* means an engine whose only purpose is to start up a combustion turbine.

Distillate Fuel. For the purposes of this license, *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.

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 the installation of six black start emergency generators (BSEG) at Bucksport Generation 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 Emissions Increase” levels as given in *Definitions Regulation*, 06-096 Code of Maine Rules (C.M.R.) ch. 100.

Pollutant	Proposed Licensed Annual Emissions from the BSEGs (ton/year)	Significant Emissions Increase Levels (ton/year)
PM	1.7	25
PM ₁₀	0.5	15
PM _{2.5}	0.5	10
SO ₂	0.02	40
NO _x	31.9	40
CO	3.0	100
VOC	0.8	40
CO ₂ e*	2,352	75,000

* Carbon dioxide equivalents

The above values are for the six BSEGs only. None of the other equipment at the facility is affected by this NSR license. PM₁₀, PM_{2.5}, NO_x, CO and VOC emission factors and resulting emission totals are based on the worst-case generator operating scenario provided by the manufacturer.

Therefore, 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 since the changes being made are not addressed or prohibited in the Part 70 air emission license. An application to incorporate the requirements of this NSR license into the Part 70 air emission license shall be submitted no later than 12 months from commencement of the requested operation.

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.

Before proceeding with the control requirements for each unit, a general process description is provided to identify where the equipment fits into the process.

Process Description

Bucksport Generation is currently licensed to operate a dual fuel gas combustion turbine (G4) which is operated as a simple cycle turbine. The facility is licensed to operate in either simple cycle or combined cycle mode but has modified the infrastructure to operate in simple cycle configuration only. At present, Bucksport Generation does not have the capability to start up the G4 turbine during grid failures.

When Bucksport Generation's electric generation equipment is offline, the facility draws its power from the grid, which allows the electric generation equipment to be restarted as necessary. In the event of a regional grid outage, this power would not be available, and the G4 turbine would not be able to restart. In order to be able to start up the facility's electric generation equipment and assist in restoring the regional electric grid, Bucksport Generation has proposed to install and operate six black start emergency generators, BSEG #1-#6, which will provide the power necessary to start the facility's electric generation equipment in the event of a regional grid outage. This ability will allow Independent System Operator-New England (ISO-NE) to call upon Bucksport Generation to provide power to help restart other electric generating stations and thus help restore the regional electric grid during grid outage events.

B. BSEG #1-#6

1. Project Description

Bucksport Generation proposes to install six 2 MW BSEGs, identified as BSEG #1-#6, before the end of calendar year 2018. Bucksport Generation anticipates using these units as black start emergency generators to provide the electric energy required to power the systems necessary to operate and supply power when grid power is not available. This will allow Bucksport Generation to assist in maintaining electric grid reliability and to help facilitate a stable and orderly restoration of the power system in the event of a partial or complete shutdown of the system.

BSEG #1-#6 will fire distillate fuel, exhaust through separate stacks, and for licensing purposes be designated as *black start emergency engines*. As black start emergency engines, BSEG #1-#6 will be required to start up quickly in the event of a regional

electric grid failure, and will only operate for short periods to assist in the startup of the facility's electric generation equipment. As emergency engines, BSEG #1-#6 will each have an operating limit of 100 hr/year for testing and maintenance (non-emergency) purposes.

In order to cap emissions from the units, Bucksport Generation has proposed to limit total operating hours for each unit to 250 hours/year for both emergency and non-emergency use combined. Up to 100 hours/year of the 250 hours/year limit may be used for non-emergency purposes in accordance with *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, 40 Code of Federal Regulations (C.F.R.) Part 60, Subpart III. The engines are certified to meet U.S. EPA emission limits when operated as emergency engines; the certificate of conformity was submitted to the Department with this license application.

2. Best Available Control Technology (BACT) – BSEG #1-#6

a. Particulate Matter: PM/PM₁₀

Particulate matter 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, which means they will be required to meet EPA emission standards for emergency stationary engines as discussed in section (4.)(b.)(1), below.

Technically feasible PM control for distillate fired generators includes Diesel Particulate Filters (DPF). According to the California Air Resources Board, the cost to install DPF is approximately \$38.00 per horsepower. For this proposed installation, the capital costs increase for each generator would be approximately \$111,600 with an overall capital project increase of approximately \$669,600. Assuming a PM control efficiency of 85%, this would result in an annual facility PM emissions reduction of 0.36 ton per year or \$1.86 million per ton. The reduction in emissions is not a significant environmental benefit and not economically feasible.

Thus, BACT for PM/PM₁₀ emissions from BSEG #1-#6 shall be the proper operation and maintenance of the units, installation of EPA certified emergency stationary engines as required in 40 C.F.R. § 60.4205(b), limiting total annual operations to 250 hours/year for each unit, and the following emission limits for each engine:

	Emission Limit Basis	lb/MMBtu	lb/hr
PM	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)	0.12	2.3
PM ₁₀	Manufacturer Data	--	0.6

b. Sulfur Dioxide: SO₂

For emergency engines that fire distillate fuel, operate only for short periods of time, and operate for less than 250 hours/year, the use of wet scrubbers or other SO₂ add-on control methods would not be economically feasible considering the minimal emissions due to the limited use of the engines. The most practical method for limiting SO₂ emissions is the use of low sulfur fuel, such as distillate fuel with a sulfur content no greater than 0.0015% by weight. BACT for SO₂ emissions from BSEG #1-#6 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), limiting total annual operations to 250 hours/year for each unit, and the following emission limit per engine:

	Emission Limit Basis	lb/hr
SO ₂	0.0015 lb/MMBtu, based on firing distillate fuel with a maximum sulfur content of 0.0015% by weight	0.03

c. Nitrogen Oxides: NO_x

Potentially available control options for reducing emissions of NO_x from distillate fuel-fired generators 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. Most new engines are designed with these features as standard equipment.

SCR is a post-combustion NO_x reduction technology that uses ammonia to react with NO_x in the gas stream in the presence of a catalyst to form nitrogen and water. Technically feasible NO_x control for distillate-fired engines includes SCR. According to the California Air Resources Board, the cost to install SCR is approximately \$80 per horsepower. For this proposed installation, the capital costs increase for each generator would be approximately \$234,960. The overall project increase would be approximately \$1,409,760. Assuming a NO_x control efficiency of 90%, this would result in an annual emissions reduction of 28.6 ton per year. Cost per ton of NO_x reduced will be approximately \$49,206. SCR would not be economically feasible considering the minimal emission reduction due to the limited use of the engines. Additionally, SCR is not technically feasible for engines that operate for short durations and require quick start-ups.

NSCR is another post-combustion NO_x reduction technology that uses a catalyst to convert CO, NO_x, and hydrocarbons into carbon dioxide, nitrogen, and water without the use of an additional reagent. Engines operating with NSCR require strict air-to-fuel control to maintain high reduction effectiveness without increasing hydrocarbon emissions. To achieve effective NO_x reduction performance with

NSCR, the engine may need to run with a richer fuel adjustment than normal, which means that the engines would have to run using less air per unit of fuel being combusted than they otherwise would. NSCR would not be economically feasible considering the minimal emissions due to the limited use of the engines, and would not be technically feasible because engines firing distillate fuel inherently operate lean and therefore have exhaust oxygen levels in excess of those required to effectively use NSCR.

BACT for NO_x emissions from BSEG #1-#6 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), limiting total annual operations to 250 hours/year for each unit, and the following emission limit per engine:

	Emission Limit Basis	lb/hr
NO _x	Manufacturer Data	42.5

d. Carbon Monoxide and Volatile Organic Compounds: CO and 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 engines are generally controlled through proper operation and maintenance. Oxidation Catalysts (OC) have been used on large generators to reduce CO and VOC emission levels in the exhaust. According to the engine supplier, the capital costs increase for each generator would be approximately \$60,000. The overall project increase would be approximately \$360,000. Assuming a control efficiency of 90% for VOC and CO, this would result in an annual emissions reduction of 0.76 and 2.7 ton per year, respectively. Cost per ton of pollutant removed would be approximately \$78,950 and \$22,222, respectively. However, like NSCR technology, use of an oxidation catalyst on an emergency engine with limited yearly use would not provide a significant environmental benefit and thus would not be economically feasible.

Oxidation catalysts have been used on large generators to reduce CO and VOC emission levels in the exhaust, but, like NSCR technology, use of an oxidation catalyst on an emergency engine with limited yearly use would not provide a significant environmental benefit and thus would not be economically feasible.

BACT for CO and VOC emissions from BSEG #1-#6 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), limiting total annual operations to 250 hours/year for each unit, and the following emission limits per engine:

	Emission Limit Basis	lb/hr
CO	Manufacturer Data	4.0
VOC	Manufacturer Data	1.1

e. Visible Emissions

BACT for visible emissions from BSEG #1-#6 shall be the following: Visible emissions from each engine shall not exceed 20% opacity on a six-minute block average basis.

Bucksport Generation may elect to comply with the following work practice standards during periods of startup in lieu of the visible emission standards listed above:

- (1) Bucksport Generation shall maintain a log (written or electronic) of the date, time, and duration of all engine startups which result in the operator electing to utilize work practice standards.
- (2) The engine(s) shall be operated in accordance with the manufacturer's emission-related operating instructions.
- (3) Bucksport Generation shall minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations shall apply.
- (4) The engine(s), including any associated air pollution control equipment, shall be operated at all times in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the unit.

f. Operating Hours Restriction

Bucksport Generation shall be limited to an operating hour restriction of 250 hours/year (each) for BSEG #1-#6, with a limit of 100 hours/year (each) for non-emergency operations included in the 250 hour/year limit.

3. Periodic Monitoring – BSEG #1-#6

Periodic monitoring for BSEG #1-#6 shall consist of recordkeeping to document hours of operation of each engine on a monthly and calendar year total basis.

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

Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 C.F.R. Part 60, Subpart IIII is applicable to the emergency engines listed above 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 IIII, 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 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 or equipment failure;
- 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

BSEG #1- #6 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 the BSEG #1-#6 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
BSEG #1- #6 shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by Bucksport Generation that are approved by the engine manufacturer. Bucksport Generation 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
BSEG #1-#6 shall each 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
Bucksport Generation shall keep records that include maintenance conducted on the engines and the hours of operation of each engine recorded through the non-resettable hour meter. Documentation shall include the number of hours each unit operated for emergency purposes, the number of hours each unit operated for non-emergency purposes, and the reason each engine was in operation during each time. [40 C.F.R. § 60.4214(b)]

C. Incorporation into the Part 70 Air Emission License

The requirements in this 06-096 C.M.R. ch. 115 New Source Review license shall apply to the facility upon issuance. Per *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.

D. Annual Emissions

The Total annual licensed emissions from Bucksport Generation shall be restricted to the following annual emissions based on a 12-month rolling total:

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

Equipment	PM	PM₁₀	SO₂	NO_x	CO	VOC
Boilers 5, 6, 8, and the gas turbine	351	351	1,400	1,410	628	205
Diesel Emergency Generators (Onan 1, 2, and 3 total)	2.3	2.3	0.3	17.4	1.7	0.6
Black Start Emergency Generators #1 - #6	1.7	0.5	0.02	31.9	3.0	0.8
TOTALS	355.0	353.8	1,400.3	1,459.3	632.7	206.4

This table has been updated to incorporate the removal of the pulp mill and paper machines at the facility addressed in A-22-77-16-M (10/2/15) and A-22-77-17-O (1/11/16).

Bucksport Generation is an area source for hazardous air pollutants; therefore, HAP emissions shall not exceed the following:

Pollutant	Tons/year
Single HAP	9.9
Total HAP	24.9

III. AMBIENT AIR QUALITY ANALYSIS

Bucksport Generation previously submitted an ambient air quality analysis for the biomass upgrade project for Boiler 8 (A-22-77-4-A, November 29, 2010) demonstrating that emissions from the facility, in conjunction with all other sources, do not violate ambient air quality standards. That analysis was performed with both Boiler 5 and the Gas Turbine operating simultaneously and Boiler 5 firing #6 fuel oil. The fuel in Boiler 5 has since been restricted to natural gas; therefore, emissions will be less than those included in the ambient air quality analysis. An additional ambient air quality analysis is not required for this minor modification.

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-22-77-21-A pursuant to the preconstruction licensing requirements of 06-096 C.M.R. ch. 115 and subject to the standard and special 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) BSEG #1-#6

- A. BSEG #1-#6 shall each be limited to 250 hours of operation per calendar year, with no more than 100 hours/year of the 250 hours/year being used for testing and maintenance (non-emergency) purposes. Bucksport Generation shall maintain records documenting usage of BSEG #1-#6 on a monthly and calendar year total basis.
[06-096 C.M.R. ch. 115, BACT]
- B. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
BSEG #1	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a) and 06-096 C.M.R. ch. 115, BACT
BSEG #2	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a) and 06-096 C.M.R. ch. 115, BACT
BSEG #3	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a) and 06-096 C.M.R. ch. 115, BACT
BSEG #4	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a) and 06-096 C.M.R. ch. 115, BACT
BSEG #5	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a) and 06-096 C.M.R. ch. 115, BACT
BSEG #6	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a) and 06-096 C.M.R. ch. 115, BACT

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

Unit	PM (lb/hr)	PM₁₀ (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
BSEG #1	2.3	0.6	0.03	42.5	4.0	1.1
BSEG #2	2.3	0.6	0.03	42.5	4.0	1.1
BSEG #3	2.3	0.6	0.03	42.5	4.0	1.1
BSEG #4	2.3	0.6	0.03	42.5	4.0	1.1
BSEG #5	2.3	0.6	0.03	42.5	4.0	1.1
BSEG #6	2.3	0.6	0.03	42.5	4.0	1.1

D. Visible emissions from BSEG #1-#6 shall each not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

Bucksport Generation may elect to comply with the following work practice standards during periods of startup in lieu of the visible emission standards listed above:

1. Bucksport Generation shall maintain a log (written or electronic) of the date, time, and duration of all engine startups which result in the operator electing to utilize work practice standards.
2. The engine(s) shall be operated in accordance with the manufacturer's emission-related operating instructions.
3. Bucksport Generation shall minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations shall apply.
4. The engine(s), including any associated air pollution control equipment, shall be operated at all times in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the unit.

[06-096 C.M.R. ch. 115, BACT]

E. The BSEG #1-#6 shall each 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 engines are certified to meet U.S. EPA emission limits when operated as emergency engines. The certification shall be maintained by the source and submitted to the Department upon request. [40 C.F.R. § 60.4205(b)]

2. **Ultra-Low Sulfur Fuel**

The fuel fired in the engines 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 C.F.R. § 60.4207(b) and 06-096 C.M.R. ch. 115]

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**

a. As emergency engines, the BSEG #1-#6 shall each 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]

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

5. **Operation and Maintenance**

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

**Bucksport Generation LLC
Hancock County
Bucksport, Maine
A-22-77-21-A**

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**Departmental
Findings of Fact and Order
New Source Review
NSR #22**

- (2) Bucksport Generation shall submit an application to incorporate this NSR license into the facility's Part 70 air emission license no later than 12 months from commencement of the requested operation. [06-096 C.M.R. ch. 140 § 1(C)(8)]

DONE AND DATED IN AUGUSTA, MAINE THIS 23 DAY OF October, 2018.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Cone for
PAUL MERCER, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 9/7/2018

Date of application acceptance: 9/7/2018

Date filed with the Board of Environmental Protection:

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

