



DEPARTMENT ORDER

**Bucksport Generation LLC
Hancock County
Bucksport, Maine
A-22-70-D-R/A**

**Departmental
Findings of Fact and Order
Part 70 Air Emission License
Renewal with Amendment**

FINDINGS OF FACT

After review of the Part 70 License renewal and amendment applications, 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

FACILITY	Bucksport Generation LLC
LICENSE TYPE	Part 70 License Renewal and Part 70 Significant License Modification
NAICS CODES	221112
NATURE OF BUSINESS	Fossil Fuel Electric Power Generation
FACILITY LOCATION	30 Generation Lane, Bucksport, Maine ¹

Bucksport Generation LLC (Bucksport Generation) is an electrical generating facility consisting of a combustion turbine and supporting equipment. The facility formerly included a pulp and papermaking operation. However, all equipment associated with the manufacturing operations has been removed or is in the process of being removed. Related changes to applicable requirements are addressed in this air emission license.

Bucksport Generation has the potential to emit more than 100 tons per year (tpy) of nitrogen oxides (NO_x) and carbon monoxide (CO); therefore, the source is classified as a major source for criteria pollutants.

Bucksport Generation does not have the potential to emit 10 tpy or more of a single hazardous air pollutant (HAP) or 25 tpy or more of combined HAP; therefore, the source is classified as an area source for HAP.

¹ The physical address of this facility has been updated due to changes in the e-911 address system.

B. Emission Equipment

The following equipment is addressed in this Part 70 Air Emission License:

Bucksport Generation has requested the removal of all equipment from their air emission license except the following:

Fuel Burning Equipment

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type, % sulfur
GEN4	1,963	1,963,000 scf/hr	natural gas
	2,082	15,200 gal/hr ^a	distillate fuel
Gas Heater ^b	4.1	4,100 scf/hr	natural gas
BSEG #1 ^a	19.12	138 gal/hr	distillate fuel
BSEG #2 ^a	19.12	138 gal/hr	distillate fuel
BSEG #3 ^a	19.12	138 gal/hr	distillate fuel
BSEG #4 ^a	19.12	138 gal/hr	distillate fuel
BSEG #5 ^a	19.12	138 gal/hr	distillate fuel
BSEG #6 ^a	19.12	138 gal/hr	distillate fuel
EG1 ^a	1.0	1,020 scf/hr	natural gas
Fire Pump #1	1.2	9.1 gal/hr	distillate fuel

^aThe maximum firing rate for distillate fuel has been updated based on an updated heat input of 0.137 MMBtu/gal for distillate fuel. This does not represent any change to the unit itself.

^bDenotes equipment not previously addressed in the Part 70 Air Emission License.

Note: BSEG = Black Start Emergency Generator, EG = Emergency Generator

Bucksport Generation has additional insignificant activities which do not need to be listed in the emission equipment table above. The list of insignificant activities can be found in the Part 70 Air Emission License application and in Appendix B of *Part 70 Air Emission License Regulations*, 06-096 C.M.R. ch. 140.

C. Acronyms and Units of Measure

ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BPT	Best Practical Treatment
C.F.R.	Code of Federal Regulations
C.M.R.	Code of Maine Rules

CAM	Compliance Assurance Monitoring
CEMS	Continuous Emissions Monitoring System
CMS	Continuous Monitoring System
CO	Carbon Monoxide
CO _{2e}	Carbon Dioxide equivalent
COMS	Continuous Opacity Monitoring System
CPMS	Continuous Parameter Monitoring System
EPA or US EPA	United States Environmental Protection Agency
gal/hr	gallon per hour
GHG	Greenhouse Gases
HAP	Hazardous Air Pollutants
HRSG	heat recovery steam generator
lb	pound
lb/hr	pounds per hour
lb/MMBtu	pounds per million British Thermal Units
M.R.S.	Maine Revised Statutes
MMBtu	Million British Thermal Units
MMBtu/hr	million British Thermal Units per hour
MW	megawatt
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NO _x	Nitrogen Oxides
NSPS	New Source Performance Standards
NSR	New Source Review
O ₂	Oxygen
PM	Particulate Matter less than 100 microns in diameter
PM ₁₀	Particulate Matter less than 10 microns in diameter
ppmdv	parts per million on a dry volume basis
RACT	Reasonably Available Control Technology
RICE	Reciprocating Internal Combustion Engine
SO ₂	Sulfur Dioxide
tpy	ton per year
VOC	Volatile Organic Compounds

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 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.

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 Bucksport Generation is for the renewal of their existing Part 70 Air Emission License and subsequent Part 70 amendments, pursuant to Section 2(A) of *Part 70 Air Emission License Regulations*, 06-096 Code of Maine Rules (C.M.R.) ch. 140.

Bucksport Generation has also requested incorporation into the Part 70 Air Emission License the relevant terms and conditions of the New Source Review (NSR) licenses issued to the facility pursuant to *Major and Minor Source Air Emission License Regulations*, 06-096 C.M.R. ch. 115. NSR License A-22-77-22-M (issued 10/29/2019) consolidated all previously applicable NSR requirements for Bucksport Generation into one document. NSR License A-22-77-23-M (issued 5/1/2020) then made additional changes to NSR conditions. Therefore, incorporating the terms and conditions contained in those two NSR licenses into the Part 70 Air Emission License encompasses all relevant NSR requirements.

Therefore, the license is considered to be a Part 70 Air Emission License renewal with a Part 70 Significant Modification for the incorporation of NSR requirements.

F. Facility Description

Bucksport Generation operates a dual fuel gas turbine (GEN4) which may be operated as either a simple cycle turbine to produce electricity or as a combined cycle turbine to produce both electricity and steam. The facility also includes additional support equipment for GEN4, including six black start emergency generators, a gas heater, an emergency generator and a fire pump.

The facility is located at the site of a former pulp and paper manufacturing facility. However, all equipment associated with the manufacturing operations is no longer being used and has been removed or is in the process of being removed.

G. General Facility Requirements

Bucksport Generation is subject to the following state and federal regulations listed below in addition to the regulations listed for specific units as described further in this license.

Citation	Requirement Title
06-096 C.M.R. ch. 101	Visible Emissions Regulation
06-096 C.M.R. ch. 102	Open Burning
06-096 C.M.R. ch. 103	Fuel Burning Equipment Particulate Emission Standard
06-096 C.M.R. ch. 106	Low Sulfur Fuel Regulation
06-096 C.M.R. ch. 109	Emergency Episode Regulations
06-096 C.M.R. ch. 110	Ambient Air Quality Standards
06-096 C.M.R. ch. 116	Prohibited Dispersion Techniques
06-096 C.M.R. ch. 117	Source Surveillance – Emissions Monitoring
06-096 C.M.R. ch. 130	Solvent Cleaners
06-096 C.M.R. ch. 137	Emission Statements
06-096 C.M.R. ch. 140	Part 70 Air Emission License Regulations
06-096 C.M.R. ch. 143	New Source Performance Standards
40 C.F.R. Part 60, Subpart GG	Standards of Performance for Stationary Gas Turbines
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 JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
40 C.F.R. Part 70	State Operating Permit Programs
40 C.F.R. Part 72	Permits Regulation (Acid Rain)
40 C.F.R. Part 75	Continuous Emissions Monitoring
40 C.F.R. Part 98	Mandatory Greenhouse Gas Reporting

Note: C.M.R. = Code of Maine Regulations
C.F.R. = Code of Federal Regulations

II. BEST PRACTICAL TREATMENT (BPT) AND EMISSION STANDARDS

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 existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emission from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. NO_x RACT (Reasonably Available Control Technology)

Reasonably Available Control Technology for Facilities that Emit Nitrogen Oxides, 06-096 C.M.R. ch. 138 (NO_x RACT) is applicable to sources that had the potential to emit quantities of NO_x equal to or greater than 100 tpy prior to 1995. None of the emission units included on Bucksport Generation's license was installed prior to 1995. Therefore, 06-096 C.M.R. ch. 138 does not apply to Bucksport Generation.

C. VOC RACT (Reasonably Available Control Technology)

Reasonably Available Control Technology for Facilities that Emit Volatile Organic Compounds, 06-096 C.M.R. ch. 134 (VOC RACT) is applicable to sources that have the potential to emit quantities of VOC equal to or greater than 40 tpy from non-exempt equipment. Due to the removal of emission units from Bucksport Generation's license, the facility no longer has the potential to emit greater than 40 tpy of VOC. Therefore, 06-096 C.M.R. ch. 134 does not apply to Bucksport Generation.

D. Acid Rain

GEN4 is subject to the federal Acid Rain Program, *State Operating Permits Program*, 40 C.F.R. Part 70, and *Permits Regulation*, C.F.R. Part 72; therefore, the facility is required to have a Phase II acid rain permit. The facility was issued an acid rain permit, A-22-70-A-S, on 3/17/1999, and the acid rain permit is incorporated in this renewal.

E. Mandatory Greenhouse Gas (GHG) Reporting

Federal regulation *Mandatory Greenhouse Gas Reporting*, 40 C.F.R. Part 98, which contains GHG reporting and related monitoring and recordkeeping requirements, is applicable to the owners/operators of any facility which falls into any one of the following three categories, per *General Provisions, Who must report?*, 40 C.F.R. § 98.2.

- (a)(1) A facility that contains any source category that is listed in Table A–3 of this subpart in any calendar year starting in 2010.
- (a)(2) A facility that contains any source category that is listed in Table A–4 of this subpart and that emits 25,000 metric tons CO₂e or more per year in combined emissions from stationary fuel combustion units, miscellaneous uses of carbonate, and all applicable source categories that are listed in Table A–3 and Table A–4 of this subpart.
- (a)(3) A facility that in any calendar year starting in 2010 meets all three of the conditions listed in this paragraph (a)(3). For these facilities, the annual GHG report must cover emissions from stationary fuel combustion sources only.
 - (i) The facility does not meet the requirements of either paragraph (a)(1) or (a)(2) of this section.
 - (ii) The aggregate maximum rated heat input capacity of the stationary fuel combustion units at the facility is 30 MMBtu/hour or greater.
 - (iii) The facility emits 25,000 metric tons CO₂e or more per year in combined emissions from all stationary fuel combustion sources.

If Bucksport Generation exceeds the use of 458 MMscf of natural gas in a calendar year, the facility will meet all three conditions listed in paragraph (a)(3) above and will be subject to the recordkeeping and reporting requirements of 40 C.F.R. Part 98.

This facility shall fulfill the recordkeeping and reporting requirements of 40 C.F.R. Part 98.

F. Best Available Retrofit Technology (BART)

This facility previously operated BART eligible sources as defined in *Protection of Visibility*, 40 C.F.R. Part 51, Subpart P. However, all applicable units have been removed. Therefore, all previous BART findings are considered obsolete and no longer applicable.

G. CO₂ Budget Source

Bucksport Generation was issued license A-22-78-A-N, issued 1/15/2008, per Maine's *CO₂ Budget Trading Program*, 06-096 C.M.R. ch. 156 for GEN4. This license was amended through A-22-78-B-A, issued 10/6/2015.

H. Compliance Assurance Monitoring (CAM)

Compliance Assurance Monitoring, 40 C.F.R. Part 64 is applicable to units at major sources if the unit has emission limits, a control device to meet the limits, and pre-control emissions greater than 100% of the major source threshold (50 tons/year for VOC and 100 tpy for any other criteria pollutant).

This regulation's 40 C.F.R. § 64.2(b)(1)(vi) specifies the exemption from specific CAM requirements for any emission unit subject to emission limitations or standards for which a Part 70 air emission license specifies a continuous compliance determination method. Furthermore, 40 C.F.R. § 64.2(b)(1)(i) specifies the exemption from specific CAM requirements for any emission unit subject to emission limitations or standards in a NSPS or NESHAP regulation proposed by the Administrator after November 15, 1990. [40 C.F.R. Part 64 § 64.2(b)]

The following table lists all the specific pollutants for each unit meeting CAM applicability criteria and the determination of the applicability of CAM requirements for each.

40 C.F.R. Part 64 Applicability Table

Unit	Pollutant	CAM Required	Reason	Regulatory Authority
GEN4	NO _x	No	Operating a NO _x CEMS	40 C.F.R. § 64.2(b)(1)(vi)
	CO	No	Emissions are greater than 100 tpy, but no control device is used. Also, operating a CO CEMS.	40 C.F.R. §§ 64.2(a)(2) and 64.2(b)(1)(vi)

Therefore, there are no units at this facility subject to CAM requirements.

I. Fuel Sulfur Content Requirements

Bucksport Generation is licensed to fire distillate fuel which, by definition, has a sulfur content of 0.5% or less by weight. Per 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 at this facility shall not exceed 0.0015% by weight (15 ppm).

J. GEN4

GEN4 is a GE Frame 7 gas turbine that fires primarily natural gas with distillate fuel as a secondary alternative fuel. It has a maximum heat input rating of approximately 1,963 MMBtu/hr firing natural gas and 2,082 MMBtu/hr firing distillate fuel. The turbine system produces a nominal 175 MW. GEN4 was first fired in October 2000 and brought on-line in January 2001. Emissions exit through a 250-ft above ground stack.

GEN4 was originally configured as a combined cycle unit with a non-fired heat recovery steam generator (HRSG) system. Steam from the HRSG supplied steam turbines G3 and G5. In air emission license A-22-77-18-A (issued 1/13/2016), the Department also approved the operation of GEN4 as a simple cycle system, i.e., operation of GEN4 without utilizing the HRSG or steam turbines.

GEN4 is limited to firing no more than 21,587,040 gallons of distillate fuel per year. This federally-enforceable restriction limits GEN4 to an annual capacity factor for non-gaseous fuel of less than 30%. Therefore, GEN4 is exempt from the requirement to install a COMS in *Source Surveillance – Emissions Monitoring*, 06-096 C.M.R. ch. 117. [06-096 C.M.R. ch. 117, § 9(A)(1)(b)]

1. Control Equipment

Control equipment for GEN4 consists of dry low NO_x combustors. Emissions of NO_x are also controlled by water injection when firing distillate fuel.

2. Startup, Shutdown, Fuel Transfer, and Turbine Re-Tuning

Bucksport Generation shall minimize emissions from GEN4 to the maximum extent practicable during startup and shutdown, during fuel transfer, and under maintenance or adjustment conditions following major overhauls/rebuilds (re-tuning), by following proper operating procedures to minimize the emissions of air contaminants to the maximum extent practicable. Gas Turbine startup and shutdown and fuel transfer limits for NO_x and CO shall not exceed the following:

Pollutant	Fuel	ppmdv
NO _x	natural gas or distillate fuel	200 @ 15% O ₂ (1-hr block average)
CO	natural gas or distillate fuel	2,250 @ 15% O ₂ (1-hr block average)

a. Definitions

Turbine startup shall be defined as that period of time from initial combustion in GEN4 until the unit reaches “Mode 6” and steady state load operation. When firing natural gas, steady state operation shall be defined as when the GEN4 turbine NO_x emissions reach 9 ppm or less. When firing distillate fuel, steady state operation shall be defined as when the GEN4 turbine NO_x emissions reach 42 ppm or less. Aborted startups shall be included in this definition.

This period shall not exceed 90 minutes for a hot start, 180 minutes for a warm start, or 240 minutes for a cold start. A hot start shall be defined as startup when

the generating unit has been down for 2 hours or less. A warm start shall be defined as startup when the generating unit has been down for more than 2 hours and less than or equal to 48 hours. A cold start shall be defined as startup when the generating unit has been down for more than 48 hours.

Shutdown shall be defined as that period of time from steady state operation to cessation of combustion turbine firing, or when the turbine goes into a fired shutdown. Aborted shutdowns shall be included in this definition. This period shall not exceed 60 minutes.

A *fuel transfer* mode shall be defined as the period of time during which the fuel fired in the turbine is switched from fuel oil to gas or gas to fuel oil. Aborted fuel transfer shall be included in this definition. This period shall not exceed 120 minutes.

Turbine re-tuning shall be defined as that period of time from initiation of combustion turbine firing until two hours after the computer has signaled the turbine reaching base load. This period shall not exceed 48 hours for each fuel.

b. Monitoring During Startup, Shutdown, Fuel Transfer, and Turbine Re-Tuning

Bucksport Generation shall maintain records of startups, shutdowns, fuel transfers, and turbine re-tuning that shall include dates, times, and duration of each.

3. New Source Performance Standards (NSPS)

GEN4 is subject to the New Source Performance Standards (NSPS) titled *Standards of Performance for Stationary Gas Turbines*, 40 C.F.R. Part 60, Subpart GG. These standards apply to stationary gas turbines with a heat input at peak load of 10 MMBtu/hr or more that are constructed after October 3, 1977.

a. Standards

(1) Sulfur Dioxide (SO₂)

The fuel fired in GEN4 shall not exceed 0.8% sulfur by weight. [40 C.F.R. § 60.333(b)] This fuel sulfur content limit shall be streamlined to the lower limit required by State statute.

(2) Nitrogen Oxides (NO_x)

The NO_x emission standard for GEN4 contained in Subpart GG is based on the following formula:

$$STD = 0.0075 \frac{(14.4)}{Y} + F$$

Where:

STD = the allowable NO_x emissions concentration (percent by volume at 15% O₂ on a dry basis)

Y = the manufacture's rated heat rate at the rated load (kilojoules per watt hour)

F = NO_x emission allowance for fuel-bound nitrogen

The rated heat rate (Y) for GEN4 is 9.81 KJ/w-hr when firing natural gas and 10.64 KJ/w-hr when firing distillate fuel. Inclusion of an allowance for fuel-bound nitrogen is optional and has not been used.

Based on the above, GEN4 is subject to NO_x emission standards of 110 ppm_{dv} for natural gas and 102 ppm_{dv} for distillate fuel both at 15% O₂ on a 4-hour rolling average.

[40 C.F.R. §§ 60.332(a)(1), 60.332(b), and 60.334(j)(1)(iii)(A)]

b. Monitoring Requirements

Bucksport Generation shall install, certify, maintain, operate, and quality-assure a continuous emissions monitoring system (CEMS) for NO_x and O₂ on GEN4 and record the output of the system. The NO_x CEMS shall be installed, certified, maintained and operated in accordance with 40 C.F.R. § 60.334(b). [40 C.F.R. §§ 60.334(b) and (c)]

c. Recordkeeping

(1) Bucksport Generation shall keep records of the current tariff sheet which shall demonstrate that the maximum total sulfur content of the natural gas is 20.0 grains/100 scf or less. [40 C.F.R. § 60.334(h)(3)(i)]

(2) Bucksport Generation shall keep records of the sulfur content of each delivery of distillate fuel for GEN4. In accordance with 40 C.F.R. Part 75, Appendix D, Section 2.2.4.3, oil sampling may be performed by either the owner or operator of the affected unit, an outside laboratory, or a fuel supplier. [40 C.F.R. § 60.334(i)(1)]

- (3) Bucksport Generation shall immediately switch to one of the other oil sampling options if the sulfur content of a delivery (which was added to the tank) exceeds 0.8% by weight and shall continue to use one of the other methods until all the oil from the delivery has been combusted. [40 C.F.R. § 60.334(j)(2)(ii)]

d. Reports

Bucksport Generation shall submit reports of excess emissions and monitor downtime in accordance with 40 C.F.R. § 60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown, and malfunction. [40 C.F.R. §60.334(j)]

Each report shall include the ambient conditions (temperature, pressure, and humidity) at the time of the excess emission period unless the facility opts to use the worst-case ISO correction factor or a correction factor is not being used. [40 C.F.R. § 60.334(j)(1)(iii)(C)]

An hour of excess emission shall be any unit operating hour in which the 4-hour rolling average NO_x concentration exceeds 110 ppmdv for natural gas and 102 ppmdv for distillate fuel both at 15% O₂. [40 C.F.R. § 60.334(j)(1)(iii)(A)]

A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour, for either NO_x concentration or diluent (or both). [40 C.F.R. § 60.334(j)(1)(iii)(B)]

4. National Emissions Standards for Hazardous Air Pollutants (NESHAP)

National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines, 40 C.F.R. Part 63, Subpart YYYYY, applies to stationary combustion turbines located at a major source of HAP. Bucksport Generation is an area source of HAP. Therefore, 40 C.F.R. Part 63, Subpart YYYYY does not apply to GEN4.

5. Emission Limits and Streamlining

a. Short-Term Emission Limits When Firing Natural Gas

For GEN4, a listing of potentially applicable emission standards (when firing natural gas), the origin and authority of the standards, notation if streamlining of the standards has been requested (* denotes a request for streamlining), and the applicable emission limits can be found below. Limits are on a 1-hour block average basis unless otherwise stated.

Pollutant	Applicable Emission Standards	Origin and Authority	Licensed Emission Limits
PM	0.06 lb/MMBtu	06-096 C.M.R. ch. 103, § 2(B)(1)(c)	0.06 lb/MMBtu
	9 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	9 lb/hr
PM ₁₀	9 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	9 lb/hr
SO ₂	12 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	12 lb/hr
NO _x	110 ppmdv @ 15% O ₂ (4-hr rolling average)	40 C.F.R. Part 60, Subpart GG	110 ppmdv @ 15% O ₂ (4-hr rolling average)
	9 ppmdv @ 15% O ₂ (24-hr block average)	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	9 ppmdv @ 15% O ₂ (24-hr block average)
	65 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	65 lb/hr
CO	9 ppmdv @ 15% O ₂ (24-hr block average)	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	9 ppmdv @ 15% O ₂ (24-hr block average)
	32 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	32 lb/hr
VOC	3 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	3 lb/hr

b. Short-Term Emission Limits When Firing Distillate Fuel

For GEN4, a listing of potentially applicable emission standards (when firing distillate fuel), the origin and authority of the standards, notation if streamlining of the standards has been requested (* denotes a request for streamlining), and the applicable emission limits can be found below. Limits are on a 1-hour block average basis unless otherwise stated.

Pollutant	Applicable Emission Standards	Origin and Authority	Licensed Emission Limits
PM	0.06 lb/MMBtu	06-096 C.M.R. ch. 103, § 2(B)(1)(c)	0.06 lb/MMBtu
	17 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	17 lb/hr
PM ₁₀	17 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	17 lb/hr
SO ₂	3.15 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	3.15 lb/hr
NO _x	102 ppmdv @ 15% O ₂ (4-hr rolling average)	40 C.F.R. Part 60, Subpart GG	102 ppmdv @ 15% O ₂ (4-hr rolling average)
	42 ppmdv @ 15% O ₂ (24-hr block average)	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	42 ppmdv @ 15% O ₂ (24-hr block average)
	348 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	348 lb/hr
CO	15 ppmdv @ 15% O ₂ (24-hr block average)	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	15 ppmdv @ 15% O ₂ (24-hr block average)
	104 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	104 lb/hr
VOC	8 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	8 lb/hr

c. Visible Emissions

Visible emissions from GEN4 shall not exceed an opacity of 20% on a 6-minute block average basis, except for periods of startup during which time Bucksport Generation may demonstrate compliance through the following work practice standards in lieu of the numerical opacity limit.

[06-096 C.M.R. ch. 101, § (3)(A)(4)(b)]

- (1) Bucksport Generation shall maintain a log (written or electronic) of the date, time, and duration of all operating time, startups, shutdowns, and malfunctions for GEN4.

- (2) Bucksport Generation shall develop and implement a written startup and shutdown plan for GEN4.
- (3) The duration of unit startups in association with these work practice standards shall each not exceed one hour per occurrence.
- (4) GEN4 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.

d. Annual Emission Limits

NSR license A-22-77-11-A (issued 1/17/2014) addressed combined emission limits for GEN4 and Boiler 5 of 250 tpy for NO_x and 120 tpy for CO. Although Boiler 5 has been removed from this license, these emission limits were established in order for the Boiler 5 conversion project to be considered a minor modification. Therefore, these limits have been retained for GEN4 alone.

Therefore, GEN4 is subject to the following annual emission limits:

Pollutant	Tons/year
PM	45.2
PM ₁₀	45.2
SO ₂	46.1
NO _x	250.0
CO	120.0
VOC	16.8

These limits represent emissions from GEN4 alone at the currently licensed fuel limits, restrictions imposed as part of the Boiler 5 conversion project, and lowering the sulfur content limit for the distillate fuel to 0.0015%.

6. Short-Term Emission Limit Compliance Methods

Compliance with the short-term emission limits associated with GEN4 shall be demonstrated in accordance with the methods and frequencies indicated below or other methods or frequencies as approved by the Department.

- a. Upon request by the Department, compliance with the PM lb/MMBtu and the PM and PM₁₀ lb/hr emission limits shall be demonstrated through performance testing in accordance with 40 C.F.R. Part 60, Appendix A, Method 5 or other method as approved by the Department. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
- b. Compliance with the SO₂ lb/hr emission limits shall be demonstrated by the natural gas and fuel oil firing rate into the turbine and by fuel sample analysis of the natural gas and fuel oil sulfur content as required in accordance with 40 C.F.R. Part 60, Subpart GG, § 60.333 or by other methods allowed by 40 C.F.R. Part 75, Subpart B. For any hour during which distillate fuel is fired in GEN4, the lb/hr emission limits associated with firing distillate fuel shall apply. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
- c. Compliance with the NO_x and CO ppm_{dv} emission limits shall be demonstrated through use of a Continuous Emission Monitoring System (CEMS) which meet the performance specifications of 40 C.F.R. Part 60, Appendix B and F, 40 C.F.R. Part 75, Appendix A and B, and 06-096 C.M.R. ch. 117 as applicable. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019) and 40 C.F.R. §§ 60.334(b) and (c)]
- d. Upon request by the Department, compliance with the NO_x and CO lb/hr emission limits shall be demonstrated through performance testing in accordance with 40 C.F.R. Part 60, Appendix A, Method 20 (for NO_x) and Method 10 or 19 (for CO) or other method as approved by the Department. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
- e. Upon request by the Department, compliance with the VOC lb/hr emission limits shall be demonstrated through performance testing in accordance with 40 C.F.R. Part 60, Appendix A, Method 25A or other method as approved by the Department. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
- f. Upon request by the Department, compliance with the visible emission limits shall be demonstrated through performance testing in accordance with 40 C.F.R. Part 60, Appendix A, Method 9. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

7. Annual Emission Limit Compliance Methods

Compliance with the annual emission limits associated with GEN4 shall be demonstrated in accordance with the methods and frequencies indicated below or other methods or frequencies as approved by the Department.

[06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

- a. On a monthly basis, Bucksport Generation shall calculate and record the 12-month rolling total annual emissions (tons) from GEN4 for PM, PM₁₀, SO₂, NO_x, and CO.
- b. Monthly emissions of PM and PM₁₀ from GEN4 shall be based on the licensed PM and PM₁₀ emission limits (lb/hr) for natural gas and distillate fuel (as applicable) and the number of hours GEN4 fired each fuel in the given month.
- c. Monthly emissions of SO₂ from GEN4 shall be based on fuel flow monitoring (scf/month and gallon/month) and the sulfur content of the fuel fired.
- d. Monthly emissions of NO_x and CO from GEN4 shall be based on hourly CEMS data, if available. For periods where CEMS data is not available, Bucksport Generation shall multiply the licensed lb/hr emission limits for natural gas and distillate fuel by the number of hours GEN4 fired each fuel.

8. Compliance Assurance Monitoring

CAM is not applicable to GEN4.

9. Periodic Monitoring

Bucksport Generation shall record data and maintain records for the following monitoring values for GEN4.

- a. The number of hours GEN4 fires natural gas on a monthly basis.
[06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
- b. The number of hours GEN4 fires distillate fuel on a monthly basis. Hours in which GEN4 fired both natural gas and distillate fuel shall be counted as an hour of distillate fuel firing. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
- c. Records of whether GEN4 is in simple-cycle or combined-cycle mode for all operating hours. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
- d. Fuel use for both natural gas and distillate fuel on a monthly basis.
[06-096 C.M.R. ch. 137 and 06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
- e. Hourly NO_x CEMS data and daily totaled NO_x mass emissions.
[06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
- f. Hours of operation, including startup, shutdown, and any other down time.
[06-096 C.M.R. ch. 137 and 06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

- g. Date, time, and duration of each startup, shutdown, and malfunction of GEN4. [06-096 C.M.R. ch. 101, § (3)(A)(4)(b)]
- h. Any instances of malfunction of the air pollution control system. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
- i. Records of the current tariff sheet showing the maximum total sulfur content of the natural gas fired. [40 C.F.R. § 60.334(h)(3)(i)]
- j. Records of sulfur content for each delivery of distillate fuel. [40 C.F.R. § 60.334(i)(1)]
- k. Monthly calculations of annual emissions (tons) on 12-month rolling total from GEN4 for PM, PM₁₀, SO₂, NO_x, and CO. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

10. Parameter Monitors

During all operating times, Bucksport Generation shall continuously operate, record data, and maintain records from the following parameter monitors for GEN4: [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

Parameter	Frequency
Natural Gas Firing Rate	Monitor: Continuously Record: Continuously
Distillate Fuel Firing Rate	Monitor: Continuously Record: Continuously
Water Injection Rate	Monitor: Continuously Record: Continuously

11. CEMS and COMS

For GEN4, the table below lists the required continuous emission monitoring systems (CEMS). There are no continuous opacity monitoring systems (COMS) required for GEN4.

Pollutant and Continuous Monitors	Units	Averaging Period	Origin and Authority
NO _x CEMS	ppmdv	4-hr rolling average	40 C.F.R. Part 60, Subpart GG
	ppmdv	24-hr block average	06-096 C.M.R. ch. 115, A-22-77-22-M, 10/29/2019
O ₂ CEMS	%	1-hour average	40 C.F.R. Part 60, Subpart GG
CO CEMS	ppmdv	24-hr block average	06-096 C.M.R. ch. 115, A-22-77-22-M, 10/29/2019

K. BSEG #1 - #6

Bucksport Generation has installed six (6) black start emergency generators, known as BSEG #1 - #6. Each BSEG is rated at 2 MW, fires distillate fuel with a sulfur content not to exceed 0.0015% by weight, and exhausts through its own stack.

When Bucksport Generation's electrical 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 GEN4 turbine would not be able to restart. The BSEGs were installed to be able to start up the facility's electric generation equipment and assist in restoring the regional electric grid. BSEG #1 - #6 provide the power necessary to start the facility's electric generation equipment in the event of a regional grid outage.

As black start emergency engines, BSEG #1 - #6 are required to start up quickly in the event of a regional electric grid failure. They only operate for short periods of time to assist in the startup of the facility's electric generation equipment.

As emergency engines, BSEG #1 - #6 each have an operating limit of 100 hr/year for non-emergency purposes, including testing and maintenance. However, in order to cap emissions from these units, each of the BSEGs are also subject to a limit of 250 hr/year for both emergency and non-emergency use combined.

1. New Source Performance Standards (NSPS)

Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 C.F.R. Part 60, Subpart IIII is applicable to BSEG #1 - #6 since the units were ordered after July 11, 2005, and manufactured after April 1, 2006. By meeting the requirements of 40 C.F.R. Part 60, Subpart IIII, the internal combustion engines (ICE) also meet the requirements found in *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 C.F.R. Part 63, Subpart ZZZZ.

a. Emergency Engine Designation and Operating Criteria

Under 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 Subpart IIII, resulting in the engine being subject to requirements applicable to **non-emergency** engines.

(1) Emergency Situation Operation (On-Site)

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.

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

(1) Manufacturer Certification Requirement

BSEG #1 - #6 are 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)] BSEG #1 - #6 are certified to meet EPA emission limits when operated as emergency engines. The certificate of conformity was submitted to the Department with the license application for license A-22-77-21-A.

(2) Ultra-Low Sulfur Fuel Requirement

The distillate fuel fired in 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 Requirement

BSEG #1 - #6 shall be operated and maintained according to the manufacturer's emission-related written instructions. 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 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)]

2. National Emissions Standards for Hazardous Air Pollutants (NESHAP)

National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 C.F.R. Part 63, Subpart ZZZZ is applicable to BSEG #1 - #6. The units are considered existing emergency stationary reciprocating internal combustion engines at an area HAP source. However, the units are also subject to New Source Performance Standards. By meeting the requirements of *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, 40 C.F.R. Part 60, Subpart IIII the units also meet the requirements found in 40 C.F.R. Part 63, Subpart ZZZZ.

3. Emission Limits and Streamlining

a. Criteria Pollutants

For BSEG #1 - #6 (each), a listing of potentially applicable emission standards, the origin and authority of the standards, notation if streamlining of the standards has been requested (“*” denotes a request for streamlining), and the applicable emission limits can be found below. Limits are on a 1-hour block average basis unless otherwise stated.

Pollutant	Applicable Emission Standards	Origin and Authority	Licensed Emission Limits
PM	0.12 lb/MMBtu	06-096 C.M.R. ch. 103 § 2(B)(1)(a) and 06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	0.12 lb/MMBtu
	2.3 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	2.3 lb/hr
PM ₁₀	0.6 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	0.6 lb/hr
SO ₂	0.03 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	0.03 lb/hr
NO _x	42.5 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	42.5 lb/hr
CO	4.0 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	4.0 lb/hr
VOC	1.1 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	1.1 lb/hr

b. Visible Emissions

Visible emissions from each of the BSEGs 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 generator startups.
- (2) The BSEGs 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 during startup 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 BSEGs, 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. 101, § 3(A)(4)(a) and 06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

4. Emission Limit Compliance Methods

Compliance with the emission limits associated with BSEG #1 - #6 shall each be demonstrated in accordance with the appropriate test methods upon request of the Department.

5. Compliance Assurance Monitoring

CAM is not applicable to BSEG #1 - #6.

6. Periodic Monitoring

Bucksport Generation shall record data and maintain records for the following monitoring values for BSEG #1 - #6:

- a. Hours of operating time on a calendar year basis. [06-096 C.M.R. ch. 137]
- b. Log of the duration and reasons for all operating times as they occur.
- c. Records of all maintenance conducted.
- d. Sulfur content of the distillate fuel fired based on fuel receipts from the supplier. [40 C.F.R. Part 60, Subpart IIII]

7. Parameter Monitors

There are no Parameter Monitors required for BSEG #1 - #6.

8. CEMS and COMS

There are no CEMS or COMS required for BSEG #1 - #6.

L. EG1

Bucksport Generator operates a small emergency generator (EG1). EG1 is rated for 70kW and has a Generac engine rated at 1.0 MMBtu/hr which fires natural gas. It was manufactured in 2019.

1. New Source Performance Standards (NSPS)

Standards of Performance for Spark Ignition Internal Combustion Engines, 40 C.F.R. Part 60, Subpart JJJJ is applicable to EG1 since the unit was ordered after June 12, 2006, and manufactured after January 1, 2009. [40 C.F.R. § 60.4230] By meeting the requirements of 40 C.F.R. Part 60, Subpart JJJJ, 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 JJJJ requirements is listed below.

a. Emergency Engine Designation and Operating Criteria

Under 40 C.F.R. Part 60, Subpart JJJJ, 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 JJJJ, 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. §§ 60.4243(d) and 60.4248]

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

(1) Manufacturer Certification Requirement

The engine shall be certified by the manufacturer as meeting the emission standards for new nonroad spark ignition engines found in 40 C.F.R. Part 60, Subpart JJJJ, Table 1. [40 C.F.R. § 60.4233]

(2) Non-Resettable Hour Meter Requirement

A non-resettable hour meter shall be installed and operated on the engine. [40 C.F.R. § 60.4237]

(3) Operation and Maintenance Requirement

The engine shall be operated and maintained according to the manufacturer's written instructions or procedures developed by Bucksport Generation that are approved by the engine manufacturer. Bucksport Generation may only change those settings that are permitted by the manufacturer. [40 C.F.R. § 60.4243]

(4) Annual Time Limit for Maintenance and Testing

As an emergency engine, the unit shall be limited to 100 hours/year for maintenance and testing. The emergency engine may operate up to 50 hours per year in non-emergency situations, but those 50 hours are included in the 100 hours total allowed for maintenance and testing. The 50 hours for non-emergency use cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 C.F.R. § 60.4243(d)]

(5) Recordkeeping

Bucksport Generation shall keep records that include maintenance conducted on the engine and 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. § 60.4245(b)]

2. National Emissions Standards for Hazardous Air Pollutants (NESHAP)

National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 C.F.R. Part 63, Subpart ZZZZ is applicable to EG1. The unit is considered an existing emergency stationary reciprocating internal combustion engine at an area HAP source. However, the unit is also subject to New Source Performance Standards. By meeting the requirements of *Standards of Performance for Spark Ignition Internal Combustion Engines*, 40 C.F.R. Part 60, Subpart JJJJ the unit also meets the requirements found in 40 C.F.R. Part 63, Subpart ZZZZ.

3. Emission Limits and Streamlining

a. Criteria Pollutants

For EG1, a listing of potentially applicable emission standards, the origin and authority of the standards, notation if streamlining of the standards has been requested (“*” denotes a request for streamlining), and the applicable emission limits can be found below. Limits are on a 1-hour block average basis unless otherwise stated.

Pollutant	Applicable Emission Standards	Origin and Authority	Licensed Emission Limits
PM	0.01 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	0.01 lb/hr
PM ₁₀	0.01 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	0.01 lb/hr
SO ₂	negligible (based on 0.0015% sulfur limit, by weight)	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	negligible
NO _x	2.32 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	2.32 lb/hr
CO	3.58 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	3.58 lb/hr
VOC	0.30 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	0.30 lb/hr

b. Visible Emissions

Visible emissions from EG1 shall not exceed 10% opacity on a six-minute block average basis except for periods of startup during which time Bucksport Generation may comply with the following work practice standards in lieu of the numerical opacity limit. [06-096 C.M.R. ch. 101, § 3(A)(4)(a)]

- (1) Bucksport Generation shall maintain a log (written or electronic) of the date, time, and duration of all generator startups.
- (2) EG1 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 during startup 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) EG1, 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.

4. Emission Limit Compliance Methods

Compliance with the emission limits associated with EG1 shall be demonstrated in accordance with the appropriate test methods upon request of the Department.

5. Compliance Assurance Monitoring

CAM is not applicable to EG1.

6. Periodic Monitoring

Bucksport Generation shall record data and maintain records for the following monitoring values for EG1:

- a. Hours of operating time on a calendar year basis. [06-096 C.M.R. ch. 137]
- b. Log of the duration and reasons for all operating times as they occur. [40 C.F.R. § 60.4245(b)]
- c. Records of all maintenance conducted. [40 C.F.R. § 60.4245(b)]

7. Parameter Monitors

There are no Parameter Monitors required for EG1.

8. CEMS and COMS

There are no CEMS or COMS required for EG1.

M. Fire Pump #1

Bucksport Generation has requested the addition of an existing, small emergency engine associated with the facility's fire pump (Fire Pump #1). Fire Pump #1 was manufactured by Cummins and was installed around 1969. It is rated for 175 Hp firing distillate fuel and has a heat input of approximately 1.24 MMBtu/hr. This equipment was previously considered an insignificant activity and is now being added to Bucksport Generation's license for completeness.

1. New Source Performance Standards (NSPS)

Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 C.F.R. Part 60, Subpart III is not applicable to Fire Pump #1 since this unit was manufactured prior to April 1, 2006.

2. National Emissions Standards for Hazardous Air Pollutants (NESHAP)

National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines 40 C.F.R. Part 63, Subpart ZZZZ is applicable to Fire Pump #1. The unit is considered an existing, emergency stationary reciprocating internal combustion engine (RICE) at an area HAP source and it is not subject to New Source Performance Standards regulations. EPA's August 9, 2010 memo (*Guidance Regarding Definition of Residential, Commercial, and Institutional Emergency Stationary RICE in the NESHAP for Stationary RICE*) specifically does not exempt this unit from the federal requirements.

a. Emergency Engine Designation and Operating Criteria

Under Subpart ZZZZ, a stationary reciprocating internal combustion engine (RICE) is considered an **emergency** stationary RICE (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 Subpart ZZZZ, 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 RICE 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.

Fire Pump #1 shall be limited to the usage outlined in 40 C.F.R. § 63.6640(f) and therefore may be classified as an existing emergency stationary RICE as defined in

40 C.F.R. Part 63, Subpart ZZZZ. Failure to comply with all of the requirements listed in 40 C.F.R. § 63.6640(f) may cause this engine to not be considered an emergency engine and therefore subject to all applicable requirements for non-emergency engines.

b. 40 C.F.R. Part 63, Subpart ZZZZ Requirements

(1) Operation and Maintenance Requirements

[(40 C.F.R. § 63.6603(a) and Table 2(d))]

	Operating Limitations
Compression ignition (distillate fuel) units:	<ul style="list-style-type: none">- Change oil and filter every 500 hours of operation or annually, whichever comes first;- Inspect the air cleaner every 1000 hours of operation or annually, whichever comes first, and replace as necessary; and- Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

The engine shall be operated and maintained according to the manufacturer's emission-related written instructions, or Bucksport Generation shall develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engines in a manner consistent with good air pollution control practice for minimizing emissions. [40 C.F.R. § 63.6625(e)]

(2) Optional Oil Analysis Program

Bucksport Generation has the option of utilizing an oil analysis program which complies with the requirements of § 63.6625(i) in order to extend the specified oil change requirement. If this option is used, Bucksport Generation must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 C.F.R. § 63.6625(i)]

(3) Non-Resettable Hour Meter Requirement

A non-resettable hour meter shall be installed and operated on the engine. [40 C.F.R. § 63.6625(f)]

(4) Startup Idle and Startup Time Minimization Requirements

During periods of startup the facility must 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.

[40 C.F.R. § 63.6625(h) and 40 C.F.R. Part 63, Subpart ZZZZ Table 2d]

(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. § 63.6640(f)]

(6) Recordkeeping

Bucksport Generation shall keep records that include maintenance conducted on the engine and 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. § 63.6655(f)]

3. Emission Limits and Streamlining

a. Criteria Pollutants

For Fire Pump #1, a listing of potentially applicable emission standards, the origin and authority of the standards, notation if streamlining of the standards has been requested (“*” denotes a request for streamlining), and the applicable emission limits can be found below. Limits are on a 1-hour block average basis unless otherwise stated.

Pollutant	Applicable Emission Standards	Origin and Authority	Licensed Emission Limits
PM	0.38 lb/hr	06-096 C.M.R. ch. 140, BPT Enforceable by State-only	0.38 lb/hr Enforceable by State-only
PM ₁₀	0.38 lb/hr	06-096 C.M.R. ch. 140, BPT Enforceable by State-only	0.38 lb/hr Enforceable by State-only
SO ₂	negligible (based on 0.0015% sulfur limit, by weight)	06-096 C.M.R. ch. 140, BPT Enforceable by State-only	negligible
NO _x	5.47 lb/hr	06-096 C.M.R. ch. 140, BPT Enforceable by State-only	5.47 lb/hr Enforceable by State-only
CO	1.18 lb/hr	06-096 C.M.R. ch. 140, BPT Enforceable by State-only	1.18 lb/hr Enforceable by State-only
VOC	0.43 lb/hr	06-096 C.M.R. ch. 140, BPT Enforceable by State-only	0.43 lb/hr Enforceable by State-only

b. Visible Emissions

Visible emissions from Fire Pump #1 shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time Bucksport Generation may comply with the following work practice standards in lieu of the numerical opacity limit. [06-096 C.M.R. ch. 101, § 3(A)(4)(a)]

- (1) Bucksport Generation shall maintain a log (written or electronic) of the date, time, and duration of all generator startups.
- (2) Fire Pump #1 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 during startup 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) Fire Pump #1, 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.

4. Emission Limit Compliance Methods

Compliance with the emission limits associated with Fire Pump #1 shall be demonstrated in accordance with the appropriate test methods upon request of the Department.

5. Compliance Assurance Monitoring

CAM is not applicable to Fire Pump #1.

6. Periodic Monitoring

Bucksport Generation shall record data and maintain records for the following monitoring values for Fire Pump #1:

- a. Hours of operating time on a calendar year basis. [06-096 C.M.R. ch. 137]
- b. Log of the duration and reasons for all operating times as they occur. [40 C.F.R. §§ 63.6655(f)]
- c. Records of all maintenance conducted. [40 C.F.R. §§ 63.6655(e)]
- d. Sulfur content of the distillate fuel fired. [06-096 C.M.R. ch. 140, BPT]

7. Parameter Monitors

There are no Parameter Monitors required for Fire Pump #1.

8. CEMS and COMS

There are no CEMS or COMS required for Fire Pump #1.

N. Gas Heater

The Gas Heater was installed in 2000 as part of the facility's gas turbine project. It was originally owned/operated by Bangor Gas. However, ownership of this unit was transferred to the facility as part of a new supply contract, and it was added to the facility's license through air emission license A-22-77-20-M (issued 3/1/2016).

The Gas Heater has a maximum heat input capacity of 4.1 MMBtu/hr. It is an indirect fired heater made by Total Energy Resources, Inc. (TERI reference #E-1131-D-1). The unit fires natural gas to heat a water glycol mix that in turn heats the natural gas going to the facility.

1. New Source Performance Standards (NSPS)

Due to its size, the Gas Heater is not subject to the New Source Performance Standards (NSPS) titled *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, 40 C.F.R. Part 60, Subpart Dc. These standards apply to steam generating units with a heat input capacity of 10 MMBtu/hr or more that are constructed after June 9, 1989.

2. National Emissions Standards for Hazardous Air Pollutants (NESHAP)

The Gas Heater is not subject to *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63, Subpart JJJJJ, because it is a natural gas-fired unit and does not meet the definition of an applicable boiler. A boiler is "an enclosed device using

controlled flame combustion in which water is heated to recover thermal energy in the form of steam and/or hot water.” [40 C.F.R. § 63.11237]

3. Emission Limits and Streamlining

a. Criteria Pollutants

For the Gas Heater, a listing of potentially applicable emission standards, the origin and authority of the standards, notation if streamlining of the standards has been requested (* denotes a request for streamlining), and the applicable emission limits can be found below. Limits are on a 1-hour block average basis unless otherwise stated.

Pollutant	Applicable Emission Standards	Origin and Authority	Licensed Emission Limits
PM	0.12 lb/MMBtu	06-096 C.M.R. ch. 103 § 2(B)(1)(a)	0.05 lb/MMBtu *
	0.05 lb/MMBtu	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	
	0.21 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	0.21 lb/hr
PM ₁₀	0.21 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	0.21 lb/hr
SO ₂	0.01 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	0.01 lb/hr
NO _x	0.41 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	0.41 lb/hr
CO	0.34 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	0.34 lb/hr
VOC	0.02 lb/hr	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	0.02 lb/hr

b. Visible Emissions

Visible emissions from the Gas Heater shall not exceed 10% opacity on a 6-minute block average basis. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

The BACT visible emission limit listed above is determined to be more stringent than the applicable limit in 06-096 C.M.R. ch. 101. Therefore, the visible emission limit for the Gas Heater has been streamlined to the more stringent BACT limit and only the more stringent limit shall be included in this air emission license.

4. Emission Limit Compliance Methods

Compliance with the emission limits associated with the Gas Heater shall be demonstrated in accordance with the appropriate test methods upon request of the Department.

5. Compliance Assurance Monitoring

CAM is not applicable to the Gas Heater.

6. Periodic Monitoring

Bucksport Generation shall record data and maintain records for the following monitoring values for the Gas Heater.

- a. Hours the Gas Heater was operating or active on a monthly and calendar year basis.
[06-096 C.M.R ch. 137]
- b. Natural gas usage for the Gas Heater on a calendar year basis.
[06-096 C.M.R. ch. 137]

7. Parameter Monitors

There are no Parameter Monitors required for the Gas Heater.

8. CEMS and COMS

There are no CEMS/COMS required for the Gas Heater.

O. Portable Engines

Facility may operate portable engines on-site for maintenance and emergency-only purposes. Depending on their size and age, these engines may be subject to *Visible Emissions Regulation*, 06-096 C.M.R. ch. 101 and *Fuel Burning Equipment Particulate Emission Standard*, 06-096 C.M.R. ch. 103.

Any engine which cannot meet the definition of “portable engine” as defined by this license may be subject to additional State and Federal regulations. A license amendment may be necessary for a portable engine to be reclassified as stationary.

P. Parts Washer

Bucksport Generation does not operate any equipment that meets the applicability requirements in *Solvent Degreasers*, 06-096 C.M.R. ch. 130.

Bucksport Generation may operate aqueous-based parts washers. A parts washer with a cleaning solution that contains less than 5% VOC does not meet the definition of solvent cleaning machine, and there are no applicable requirements in 06-096 C.M.R. ch. 130. Therefore, this equipment is considered an insignificant activity and mentioned for completeness purposes only.

Q. Emissions Statement

Bucksport Generation is subject to emissions inventory requirements contained in *Emission Statements*, 06-096 C.M.R. ch. 137. Bucksport Generation shall maintain the following records in order to comply with this rule:

1. The amount of each fuel fired in GEN4, BSEG #1 - #6, EG1, Fire Pump #1, and the Gas Heater (each) on a monthly basis.
2. The sulfur content of the distillate fuel fired in GEN4, BSEG #1 - #6, and Fire Pump #1; and
3. Hours each emission unit was active or operating on a monthly basis.

In reporting year 2020 and every third year thereafter, Bucksport Generation shall report to the Department emissions of hazardous air pollutants as required by 06-096 C.M.R. ch. 137, § (3)(C). The Department will use these reports to calculate and invoice for the applicable annual air quality surcharge for the subsequent three billing periods. Bucksport Generation shall pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3). [38 M.R.S. § 353-A(1-A)]

R. Facility 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. Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, unquantifiable fugitive particulate matter emissions are not included. Maximum potential emissions were calculated based on the following assumptions:

- Firing 21,587,040 gal/yr distillate fuel with a sulfur content of 0.0015% by weight in GEN4;
- Firing GEN4 for the maximum number of remaining hours per year on natural gas;
- An annual limit of 250 tpy of NO_x from GEN4;
- An annual limit of 120 tpy of CO from GEN4;
- Operating the Gas Heater for 8,760 hrs/year;
- Operating BSEG #1 - #6 for 250 hrs/year each; and
- Operating EG1 and Fire Pump #1 for 100 hrs/year each.

Please note, this information provides the basis for fee calculation only and should not be construed to 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 ₁₀	SO ₂	NO _x	CO	VOC
GEN4	45.2	45.2	46.1	250.0	120.0	16.8
Gas Heater	0.9	0.9	–	1.8	1.5	0.1
BSEG #1 - #6	1.7	1.7	0.1	31.9	3.0	0.8
EG1	–	–	–	0.1	0.2	0.1
Fire Pump #1	–	–	–	0.3	0.1	–
Total TPY	47.8	47.8	46.2	284.1	124.8	17.8

Pollutant	Tons/year
Single HAP	9.9
Total HAP	24.9

III. AMBIENT AIR QUALITY ANALYSIS

Bucksport Generation previously submitted an ambient air quality impact analysis outlined in air emission license A-22-77-4-A (dated 11/29/2010) demonstrating that emissions from the facility, in conjunction with all other sources, do not violate ambient air quality standards (AAQS). An additional ambient air quality impact analysis is not required for Part 70 license.

ORDER

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

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

The Department hereby grants the Part 70 License A-22-70-D-R/A pursuant to 06-096 C.M.R. ch. 140 and the preconstruction permitting requirements of 06-096 C.M.R. ch. 115 and subject to the standard and specific conditions below.

All federally enforceable and State-only enforceable conditions in existing air licenses previously issued to Bucksport Generation pursuant to the Department's preconstruction permitting requirements have been incorporated into this Part 70 license, except for such conditions that the Department has determined are obsolete, extraneous, or otherwise environmentally insignificant, as explained in the Findings of Fact accompanying this Order. As such, the conditions in this license supersede all previously issued air license conditions.

Federally enforceable conditions in this Part 70 license must be changed pursuant to the applicable requirements in *Major and Minor Source Air Emission License Regulations*, 06-096 C.M.R. ch. 115 for making such changes and pursuant to the applicable requirements in 06-096 C.M.R. ch. 140.

For each standard and specific condition which is state enforceable only, state-only enforceability is designated with the following statement: **Enforceable by State-only**.

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 STATEMENTS

- (1) 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. 140]

- (2) The Part 70 license does not convey any property rights of any sort, or any exclusive privilege. [06-096 C.M.R. ch. 140]
- (3) All terms and conditions are enforceable by EPA and citizens under the CAA unless specifically designated as state enforceable. [06-096 C.M.R. ch. 140]
- (4) 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. 140]
- (5) Notwithstanding any other provision 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 C.M.R. ch. 140]
- (6) Compliance with the conditions of this Part 70 license shall be deemed compliance with any Applicable requirement as of the date of license issuance and is deemed a permit shield, provided that:
 - A. Such Applicable and state requirements are included and are specifically identified in the Part 70 license, except where the Part 70 license term or condition is specifically identified as not having a permit shield; or
 - B. The Department, in acting on the Part 70 license application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the Part 70 license includes the determination or a concise summary, thereof.

Nothing in this section or any Part 70 license shall alter or affect the provisions of Section 303 of the CAA (emergency orders), including the authority of EPA under Section 303; the liability of an owner or operator of a source for any violation of Applicable requirements prior to or at the time of permit issuance; or the ability of EPA to obtain information from a source pursuant to Section 114 of the CAA.

The following requirements have been specifically identified as not applicable based upon information submitted by the licensee in an application.

Permit Shield Table

Source	Citation	Description	Basis for Determination
Facility	06-096 C.M.R. ch. 134	VOC RACT	Facility no longer has the potential to emit more than 40 tpy of VOC
Facility	06-096 C.M.R. ch. 138	NO _x RACT	None of the licensed emission units were installed prior to 1995.
Gas Heater	40 C.F.R. Part 60, Subpart Dc	NSPS for Small Industrial-Commercial-Institutional Steam Generating Units	Equipment less than 10 MMBtu/hr heat input
GEN4	40 C.F.R. Part 60, Subpart KKKK	Standards of Performance for Stationary Combustion Turbines	Unit was not constructed, modified, or reconstructed after February 18, 2005
GEN4	40 C.F.R. Part 60, Subpart TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units	Unit was not constructed or reconstructed after January 8, 2014.
GEN4	40 C.F.R. Part 63, Subpart UUUUU	NESHAP: Coal- and Oil-Fired Electric Utility Steam Generating Units	Units subject to 40 C.F.R. Subpart YYYYY are exempt (§ 63.9983(a))
Gas Heater	40 C.F.R. Part 63, Subpart JJJJJ	NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources	Unit fires only natural gas and does not meet the definition of “boiler”
Facility	40 C.F.R. Part 64	Compliance Assurance Monitoring	Facility does not contain any equipment that meets CAM requirements

[06-096 C.M.R. ch. 140]

- (7) The Part 70 license shall be reopened for cause by the Department or EPA, prior to the expiration of the Part 70 license, if:
- A. Additional Applicable requirements under the CAA become applicable to a Part 70 major source with a remaining Part 70 license term of three or more years. However, no opening is required if the effective date of the requirement is later than the date on which the Part 70 license is due to expire, unless the original Part 70 license or any of its terms and conditions has been extended pursuant to 06-096 C.M.R. ch. 140;
 - B. Additional requirements (including excess emissions requirements) become applicable to a Title IV source under the acid rain program. Upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the Part 70 license;

- C. The Department or EPA determines that the Part 70 license contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Part 70 license; or
- D. The Department or EPA determines that the Part 70 license must be revised or revoked to assure compliance with the Applicable requirements.

The licensee shall furnish to the Department within a reasonable time any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the Part 70 license or to determine compliance with the Part 70 license.

[06-096 C.M.R. ch. 140]

- (8) No license revision or amendment shall be required, under any approved economic incentives, marketable licenses, emissions trading, and other similar programs or processes for changes that are provided for in the Part 70 license. [06-096 C.M.R. ch. 140]

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 and this license (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 140. [06-096 C.M.R. ch. 140]
- (3) 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. 140]
Enforceable by State-only
- (4) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to 38 M.R.S. § 353-A.
- (5) The licensee shall maintain and operate all emission units and air pollution control 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. 140]
Enforceable by State-only

- (6) The licensee shall retain records of all required monitoring data and support information for a period of at least six (6) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the Part 70 license. The records shall be submitted to the Department upon written request or in accordance with other provisions of this license. [06-096 C.M.R. ch. 140]
- (7) The licensee shall comply with all terms and conditions of the air emission license. The submission of notice of intent to reopen for cause by the Department, 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 the renewal of a Part 70 license or amendment shall not stay any condition of the Part 70 license. [06-096 C.M.R. ch. 140]
- (8) 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 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;
 - 2. To demonstrate compliance with the applicable emission standards; or
 - 3. 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. 140] **Enforceable by State-only**
- (9) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicates 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 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. 140] **Enforceable by State-only**

- (10) The licensee shall maintain records of all deviations from license requirements. Such deviations shall include, but are not limited to malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emission unit itself that is not consistent with the terms and conditions of the air emission license.
 - A. The licensee shall notify the Commissioner within 48 hours of a violation of any emission standard and/or a malfunction or breakdown in any component part that causes a violation of any emission standard, and shall report the probable cause, corrective action, and any excess emissions in the units of the applicable emission limitation;
 - B. The licensee shall submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component part causes a violation of any emission standard, together with any exemption requests.

Pursuant to 38 M.R.S.A. § 349(9), the Commissioner may exempt from civil penalty an air emission in excess of license limitations if the emission occurs during start-up or shutdown or results exclusively from an unavoidable malfunction entirely beyond the control of the licensee and the licensee has taken all reasonable steps to minimize or prevent any emission and takes corrective action as soon as possible. There may be no exemption if the malfunction is caused, entirely or in part, by poor maintenance, careless operation, poor design, or any other reasonably preventable condition or preventable equipment breakdown. The burden of proof is on the licensee seeking the exemption under this subsection.

C. All other deviations shall be reported to the Department in the facility's semiannual report.

[06-096 C.M.R. ch. 140]

- (11) Upon the written request of 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 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. 140]
- (12) The licensee shall submit semiannual reports of any required periodic monitoring. All instances of deviations from Part 70 license requirements must be clearly identified in such reports. All required reports must be certified by a responsible official. [06-096 C.M.R. ch. 140]
- (13) The licensee shall submit a compliance certification to the Department and EPA at least annually, or more frequently if specified in the applicable requirement or by the Department. The compliance certification shall include the following:
- A. The identification of each term or condition of the Part 70 license that is the basis of the certification;
 - B. The compliance status;
 - C. Whether compliance was continuous or intermittent;
 - D. The method(s) used for determining the compliance status of the source, currently and over the reporting period; and
 - E. Such other facts as the Department may require to determine the compliance status of the source.
- [06-096 C.M.R. ch. 140]

SPECIFIC CONDITIONS

- (14) **GEN4**
- A. Bucksport Generation's gas turbine facility shall consist of a nominal 175 MW F class, combustion turbine generator with advanced dry low NO_x combustors, and an unfired heat recovery steam generator (HRSG).
[06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
 - B. Bucksport Generation may operate GEN4 as a simple-cycle unit with the HRSG system inactive. Bucksport Generation shall remain in compliance with all applicable Gas Turbine licensing requirements while operating in simple-cycle mode.
[06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

C. Fuels

1. Bucksport Generation shall fire only natural gas and distillate fuel in GEN4. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
2. Bucksport Generation shall not exceed the use of 21,587,040 gallons per year (based on a calendar year) of distillate fuel in GEN4. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
3. The sulfur content of the distillate fuel shall not exceed 0.0015% by weight. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

D. Control Equipment

1. Bucksport Generation shall operate GEN4 with water injection during the firing of distillate fuel for NO_x emissions control. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
2. The exhaust from GEN4 shall be vented through a 250-foot above ground stack. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

E. Emission Limits

(Emission limits are on a 1-hour block average unless otherwise stated.)

1. Emissions from GEN4 shall not exceed the following, except for periods of startup, shutdown, fuel transfer periods, and turbine re-tuning:

Pollutant	Fuel	ppmdv	Origin and Authority	Enforceability
NO _x	natural gas	110 @ 15% O ₂ 4-hr rolling avg.	40 C.F.R. Part 60, Subpart GG § 60.332(a)(1)	Federally Enforceable
		9 @ 15% O ₂ 24-hr block avg.	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	
	distillate fuel	102 @ 15% O ₂ 4-hr rolling avg.	40 C.F.R. Part 60, Subpart GG § 60.332(a)(1)	
		42 @ 15% O ₂ 24-hr block avg.	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	
CO	natural gas	9 @ 15% O ₂ 24-hr block avg.	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	
	distillate fuel	15 @ 15% O ₂ 24-hr block avg.	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	

2. Emissions from GEN4 shall not exceed the following, except for periods of startup, shutdown, fuel transfer periods, and turbine re-tuning:

Pollutant	Fuel	lb/MMBtu	Origin and Authority	Enforceability
PM	any	0.06	06-096 C.M.R. ch. 103, § 2(B)(1)(c)	Federally Enforceable

3. Emissions from GEN4 shall not exceed the following, except for periods of startup, shutdown, fuel transfer periods, and turbine re-tuning:

Pollutant	Fuel	lb/hr	Origin and Authority	Enforceability
PM	natural gas	9	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)	Federally Enforceable
	distillate fuel	17		
PM ₁₀	natural gas	9		
	distillate fuel	17		
SO ₂	natural gas	12		
	distillate fuel	3.15		
NO _x	natural gas	65		
	distillate fuel	348		
CO	natural gas	32		
	distillate fuel	104		
VOC	natural gas	3		
	distillate fuel	8		

4. Emissions from GEN4 shall not exceed the following on a 12-month rolling total basis: [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

Pollutant	Tons/year
PM	45.2
PM ₁₀	45.2
SO ₂	46.1
NO _x	250.0
CO	120.0
VOC	16.8

- F. Visible emissions from GEN4 shall not exceed an opacity of 20% on a 6-minute block average basis, except for periods of startup during which time Bucksport Generation may demonstrate compliance through the following work practice standards in lieu of the numerical opacity limit:

1. Bucksport Generation shall maintain a log (written or electronic) of the date, time, and duration of all operating time, startups, shutdowns, and malfunctions for GEN4.

2. Bucksport Generation shall develop and implement a written startup and shutdown plan for GEN4.
3. The duration of unit startups in association with these work practice standards shall each not exceed one hour per occurrence.
4. GEN4 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. 101, § (3)(A)(4)(b)]

G. Compliance Requirements for Short-Term Emission Limits

1. Upon request by the Department, compliance with the PM lb/MMBtu and the PM and PM₁₀ lb/hr emission limits shall be demonstrated through performance testing in accordance with 40 C.F.R. Part 60, Appendix A, Method 5 or other method as approved by the Department. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
2. Compliance with the SO₂ lb/hr emission limit shall be demonstrated by the natural gas and distillate fuel firing rate into the turbine and by fuel sample analysis of the natural gas and distillate fuel sulfur content as required in accordance with 40 C.F.R. Part 60, Subpart GG, § 60.334 or by other methods allowed by 40 C.F.R. Part 75, Subpart B. For any hour during which distillate fuel is fired in GEN4, the lb/hr emission limits associated with firing distillate fuel shall apply. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
3. Compliance with the NO_x and CO ppmdv emission limits shall be demonstrated through use of a Continuous Emission Monitoring System (CEMS) which meets the performance specifications of 40 C.F.R. Part 60, Appendix B and F, 40 C.F.R. Part 75, Appendix A and B, and 06-096 C.M.R. ch. 117 as applicable. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
4. Upon request by the Department, compliance with the NO_x and CO lb/hr emission limits shall be demonstrated through performance testing in accordance with 40 C.F.R. Part 60, Appendix A, Method 20 (for NO_x) and Method 10 or 19 (for CO) or other method as approved by the Department. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

5. Upon request by the Department, compliance with the VOC lb/hr emission limit shall be demonstrated through performance testing in accordance with 40 C.F.R. Part 60, Appendix A, Method 25A or other method as approved by the Department. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
6. Upon request by the Department, compliance with the visible emission limits shall be demonstrated through performance testing in accordance with 40 C.F.R. Part 60, Appendix A, Method 9. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

H. Compliance Requirements for Annual Limits

1. On a monthly basis, Bucksport Generation shall calculate and record the 12-month rolling total annual emissions (tons) from GEN4 for PM, PM₁₀, SO₂, NO_x, and CO. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
2. Monthly emissions of PM and PM₁₀ from GEN4 shall be based on the licensed PM and PM₁₀ emission limits (lb/hr) for natural gas and distillate fuel (as applicable) and the number of hours GEN4 fired each fuel in the given month. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
3. Monthly emissions of SO₂ from GEN4 shall be based on fuel flow monitoring (scf/month and gallon/month) and the sulfur content of the fuel fired. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
4. Monthly emissions of NO_x and CO from GEN4 shall be based on hourly CEMS data, if available. For periods where CEMS data is not available, Bucksport Generation shall multiply the licensed lb/hr emission limits for natural gas and distillate fuel by the number of hours GEN4 fired each fuel. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

I. Turbine Startup, Shutdown, Fuel Transfer, Turbine Cleaning, and Re-Tuning [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

1. Bucksport Generation shall minimize emissions from GEN4 to the maximum extent practicable during startup and shutdown, during fuel transfer, and under maintenance or adjustment conditions (turbine re-tuning), by following proper operating procedures to minimize the emissions of air contaminants to the maximum extent practical.

2. Emissions from GEN4 during periods of startup, shutdown, fuel transfer, and turbine re-tuning shall not exceed the following:

Pollutant	Fuel	ppmdv	Ave Time	Origin and Authority
NO _x	natural gas	200 @ 15% O ₂	1-hr block	06-096 C.M.R. ch. 115, BACT (A-22-77-22-M)
	distillate fuel		1-hr block	
CO	natural gas	2,250 @ 15 O ₂	1-hr block	
	distillate fuel		1-hr block	

3. *Turbine startup* shall be defined as that period of time from initial combustion in GEN4 until the unit reaches “Mode 6” and steady state load operation. When firing natural gas, steady state operation shall be defined as when the GEN4 turbine NO_x emissions reach 9 ppm or less. When firing distillate fuel, steady state operation shall be defined as when the GEN4 turbine NO_x emissions reach 42 ppm or less. Aborted startups shall be included in this definition.

This period shall not exceed 90 minutes for a hot start, 180 minutes for a warm start, or 240 minutes for a cold start. A hot start shall be defined as startup when the generating unit has been down for 2 hours or less. A warm start shall be defined as startup when the generating unit has been down for more than 2 hours and less than or equal to 48 hours. A cold start shall be defined as startup when the generating unit has been down for more than 48 hours.

4. *Shutdown* shall be defined as that period of time from steady state operation to cessation of combustion turbine firing, or when the turbine goes into a fired shutdown. Aborted shutdowns shall be included in this definition. This period shall not exceed 60 minutes.
5. A *fuel transfer* mode shall be defined as the period of time during which the fuel fired in the turbine is switched from fuel oil to gas or gas to fuel oil. Aborted fuel transfer shall be included in this definition. This period shall not exceed 120 minutes.
6. *Turbine re-tuning* shall be defined as that period of time from initiation of combustion turbine firing until two hours after the computer has signaled the turbine reaching base load. This period shall not exceed 48 hours for each fuel.

J. Periodic Monitoring

Bucksport Generation shall record data and maintain records for the following monitoring values for GEN4:

1. The number of hours GEN4 fires natural gas on a monthly basis. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
2. The number of hours GEN4 fires distillate fuel on a monthly basis. Hours in which GEN4 fired both natural gas and distillate fuel shall be counted as an hour of distillate fuel firing. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
3. Records of whether GEN4 is in simple-cycle or combined-cycle mode for all operating hours. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
4. Fuel use for both natural gas and distillate fuel on a monthly basis. [06-096 C.M.R. ch. 137 and 06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
5. Hourly NO_x CEMS data and daily totaled NO_x mass emissions. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
6. Hours of operation, including startup, shutdown, and any other down time. [06-096 C.M.R. ch. 137 and 06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
7. Date, time, and duration of each startup, shutdown, and malfunction of GEN4. [06-096 C.M.R. ch. 101, § (3)(A)(4)(b)]
8. Any instances of malfunction of the air pollution control system. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]
9. Records of the current tariff sheet showing the maximum total sulfur content of the natural gas fired. [40 C.F.R. § 60.334(h)(3)(i)]
10. Records of sulfur content for each delivery of distillate fuel. [40 C.F.R. § 60.334(i)(1)]
11. Monthly calculations of annual emissions (tons) on 12-month rolling total from GEN4 for PM, PM₁₀, SO₂, NO_x, and CO. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

K. Parameter Monitoring

During all operating times, Bucksport Generation shall operate, record data, and maintain records from the following parameter monitors for GEN4:

Parameter	Frequency
Natural Gas Firing Rate	Monitor: Continuously Record: Continuously
Distillate Fuel Firing Rate	Monitor: Continuously Record: Continuously
Water Injection Rate	Monitor: Continuously Record: Continuously

[06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

L. CEMS

1. Bucksport Generation shall install, certify, maintain, operate, quality-assure, and record the output of the following continuous emission monitoring systems (CEMS) for GEN4 whenever the unit is operating:

Pollutant and Continuous Monitors	Units	Averaging Period	Origin and Authority
NO _x CEMS	ppmdv	4-hr rolling average	40 C.F.R. Part 60, Subpart GG
	ppmdv	24-hr block average	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)
O ₂ CEMS	%	1-hour average	40 C.F.R. Part 60, Subpart GG
CO CEMS	ppmdv	24-hr block average	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)

2. The NO_x CEMS shall be installed, certified, maintained and operated in accordance with 40 C.F.R. § 60.334(b). [40 C.F.R. §§ 60.334(b)]

M. 40 C.F.R. Part 60, Subpart GG

Following are applicable requirements of 40 C.F.R. Part 60, Subpart GG not addressed elsewhere in this Order:

1. Bucksport Generation shall immediately switch to one the of the other oil sampling options if the sulfur content of a delivery (which was added to the tank) exceeds 0.8% by weight and shall continue to use one of the other methods until all the oil from the delivery has been combusted. [40 C.F.R. § 60.334(j)(2)(ii)]
2. Bucksport Generation shall submit reports of excess emissions and monitor downtime in accordance with 40 C.F.R. § 60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown, and malfunction. [40 C.F.R. §60.334(j)]

(15) **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, (A-22-77-22-M, 10/29/2019)]

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, (A-22-77-22-M, 10/29/2019)
BSEG #2	PM	0.12	
BSEG #3	PM	0.12	
BSEG #4	PM	0.12	
BSEG #5	PM	0.12	
BSEG #6	PM	0.12	

C. Emissions shall not exceed the following:

[06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (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

1. Visible emissions from BSEG #1-#6 shall each not exceed 20% opacity on a six-minute block average basis.
2. 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:
 - a. 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.
 - b. The engines shall be operated in accordance with the manufacturer's emission-related operating instructions.
 - c. 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.

- d. The engines, 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. 101, § 3(A)(4)(a) and 06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

- E. The BSEG #1-#6 shall each meet the applicable requirements of 40 C.F.R. Part 60, Subpart III, including the following:

[06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

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)]

F. Periodic Monitoring:

Bucksport Generation shall record data and maintain records for the following monitoring values for BSEG #1 - #6:

1. Hours of operating time on a calendar year basis. [06-096 C.M.R. ch. 137]
2. Log of the duration and reasons for all operating times as they occur.
3. Records of all maintenance conducted.
4. Sulfur content of the distillate fuel fired based on fuel receipts from the supplier. [40 C.F.R. Part 60, Subpart III]

(16) **EG1**

A. Emissions shall not exceed the following:

[06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

Unit	PM (lb/hr)	PM₁₀ (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
EG1	0.01	0.01	neg.	2.32	3.58	0.30

B. Visible Emissions

Visible emission from EG1 shall not exceed 10% opacity on a six-minute block average basis except for periods of startup during which time Bucksport Generation may comply with the following work practice standards in lieu of the numerical opacity limit.

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 engines 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 engines, 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. 101, § 3(A)(4)(a) and 06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

C. EG1 shall meet the applicable requirements of 40 C.F.R. Part 60, Subpart JJJJ, including the following: [incorporated under 06-096 C.M.R. ch. 115, BPT]

1. **Manufacturer Certification**

The engine shall be certified by the manufacturer as meeting the emission standards for new nonroad spark ignition engines found in 40 C.F.R. Part 60, Subpart JJJJ, Table 1.

2. **Non-Resettable Hour Meter**

A non-resettable hour meter shall be installed and operated on the engine.
[40 C.F.R. § 60.4237 and 06-096 C.M.R. ch. 115, BPT]

3. **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). The 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. § 60.4243(d) and 06-096 C.M.R. ch. 115, BPT]

- b. Bucksport Generation shall keep records that include maintenance conducted on the engine and 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. § 60.4245(b)]

4. Operation and Maintenance

The engine shall be operated and maintained according to the manufacturer's written instructions or procedures developed by Bucksport Generation that are approved by the engine manufacturer. Bucksport Generation may only change those settings that are permitted by the manufacturer. [40 C.F.R. § 60.4243]

D. Periodic Monitoring:

Bucksport Generation shall record data and maintain records for the following monitoring values for EG1:

1. Hours of operating time on a calendar year basis. [06-096 C.M.R. ch. 137]
2. Log of the duration and reasons for all operating times as they occur. [40 C.F.R. § 60.4245(b)]
3. Records of all maintenance conducted. [40 C.F.R. § 60.4245(b)]

(17) **Fire Pump #1**

A. Emissions shall not exceed the following:

[06-096 C.M.R. ch. 140, BPT] **Enforceable by State-only**

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Fire Pump #1	0.37	0.37	neg.	5.47	1.18	0.43

B. Visible Emissions

Visible emissions from Fire Pump #1 shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time Bucksport Generation may comply with the following work practice standards in lieu of the numerical opacity limit. [06-096 C.M.R. ch. 101, § 3(A)(4)]

1. Bucksport Generation shall maintain a log (written or electronic) of the date, time, and duration of all engine startups.

2. The engine 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 during startup 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, 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.

C. 40 C.F.R. Part 63, Subpart ZZZZ

Following are applicable requirements of 40 C.F.R. Part 63, Subpart ZZZZ for Fire Pump #1 not addressed elsewhere in this Order:

1. Bucksport Generation shall meet the following operational limitations for Fire Pump #1:
 - a. Change the oil and filter every 500 hours of operation or annually, whichever comes first;
 - b. Inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
 - c. Inspect the hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

Records shall be maintained documenting compliance with the operational limitations.

[40 C.F.R. § 63.6602 and Table 2(c) and 06-096 C.M.R. ch. 140, BPT]

2. Oil Analysis Program Option

Bucksport Generation has the option of utilizing an oil analysis program which complies with the requirements of § 63.6625(i) in order to extend the specified oil change requirement. If this option is used, Bucksport Generation must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 C.F.R. § 63.6625(i)]

3. Non-Resettable Hour Meter

A non-resettable hour meter shall be installed and operated on the engine.
[40 C.F.R. § 63.6625(f)]

4. Maintenance, Testing, and Non-Emergency Operating Situations

a. The engine 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 logs) of all engine operating hours. [40 C.F.R. § 63.6640(f) and 06-096 C.M.R. ch. 140, BPT]

b. Bucksport Generation shall keep records that include maintenance conducted on the engine and 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. §§ 63.6655(e) and (f)]

5. Operation and Maintenance

The engines shall be operated and maintained according to the manufacturer's emission-related written instructions, or Bucksport Generation shall develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 C.F.R. § 63.6625(e)]

6. Startup Idle and Startup Time Minimization

During periods of startup the facility must 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.
[40 C.F.R. § 63.6625(h) & 40 C.F.R. Part 63, Subpart ZZZZ Table 2c]

D. Periodic Monitoring

Bucksport Generation shall operate, record data, and maintain records from the following periodic monitors for Fire Pump #1.

1. Hours of operating time on a calendar year basis. [06-096 C.M.R. ch. 137]
2. Log of the duration and reasons for all operating times as they occur.
[40 C.F.R. §§ 63.6655(f)]
3. Records of all maintenance conducted. [40 C.F.R. §§ 63.6655(e)]

4. Sulfur content of the distillate fuel fired. (Diesel Units 1 and 2 only)
[06-096 C.M.R. ch. 140, BPT]

(18) Gas Heater

A. Fuel

The Gas Heater shall fire only natural gas. Compliance shall be demonstrated by fuel records from the supplier showing the quantity and type. Records of fuel use shall be kept on a monthly and calendar year total basis.
[06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

B. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Gas Heater	PM	0.05	06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)

C. Emissions shall not exceed the following:

[06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

Emission Unit	PM (lb/hr)	PM₁₀ (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Gas Heater	0.21	0.21	0.01	0.41	0.34	0.02

D. Visible Emissions

Visible emissions from the Gas Heater shall not exceed 10% opacity on a 6-minute block average basis. [06-096 C.M.R. ch. 115, (A-22-77-22-M, 10/29/2019)]

E. Periodic Monitoring

Bucksport Generation shall record data and maintain records for the following monitoring values for the Gas Heater:

1. Hours the Gas Heater was operating or active on a monthly and calendar year basis.
[06-096 C.M.R. ch. 137]
2. Natural gas usage for the Gas Heater on a calendar year basis.
[06-096 C.M.R. ch. 137]

(19) Fugitive Emissions

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity on a 5-minute block average basis.
[06-096 C.M.R. ch. 101, § 3(C)]

(20) General Process Sources

Visible emissions from any general process source shall not exceed 20% on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 3(B)(4)]

(21) Parameter Monitor General Requirements

[06-096 C.M.R. ch. 140 and 117]

- A. Parameter monitors required by this license shall be installed, operated, maintained, and calibrated in accordance with manufacturer recommendations or as otherwise required by the Department.
- B. Parameter monitors required by this license shall continuously monitor data at all times the associated emissions unit is in operation. “Continuously” with respect to the operation of parameter monitors required by this license means providing equally spaced data points with at least one valid data point in each successive 15-minute period. A minimum of three valid 15-minute periods constitute a valid hour.
- C. Each parameter monitor must record accurate and reliable data. If any parameter monitor is recording accurate and reliable data less than 98% of the source-operating time within any quarter of the calendar year, the Department may initiate enforcement action. The Department may include in that enforcement action any period of time that the parameter monitor was not recording accurate and reliable data during that quarter unless the licensee can demonstrate to the Department’s satisfaction that the failure of the system to record such data was due to the performance of established quality assurance and quality control procedures or unavoidable malfunctions.

Enforceable by State-only

(22) CEMS Recordkeeping

- A. The licensee shall maintain records documenting that all CEMS are continuously accurate, reliable, and operated in accordance with 06-096 C.M.R. ch. 117, 40 C.F.R. Part 51, Appendix P, and 40 C.F.R. Part 60, Appendices B and F;
- B. The licensee shall maintain records of all measurements, performance evaluations, calibration checks, and maintenance or adjustments for each CEMS as required by 40 C.F.R. Part 51, Appendix P; and

- C. The licensee shall maintain records of other data indicative of compliance with the applicable emission standards for those periods when the CEMS were not in operation or produced invalid data. In the event the Department does not concur with the licensee's compliance determination, the licensee shall, upon the Department's request, provide additional data, and shall have the burden of demonstrating that the data is indicative of compliance with the applicable standard.

[06-096 C.M.R. ch. 140] **Enforceable by State-only**

(23) **Quarterly Reporting**

The licensee shall submit a Quarterly Report to the Bureau of Air Quality within 30 days after the end of each calendar quarter, detailing the following for the control equipment, parameter monitors and CEMS required by this license. [06-096 C.M.R. ch. 117]

- A. All control equipment downtimes and malfunctions;
- B. All CEMS downtimes and malfunctions;
- C. All parameter monitor downtimes and malfunctions;
- D. All excess events of emission and operational limitations set by this Order, Statute, state regulations, or federal regulations, as appropriate. The following information shall be reported for each excess event;
 - 1. Standard exceeded;
 - 2. Date, time, and duration of excess event;
 - 3. Amount of air contaminant emitted in excess of the applicable emission standard, expressed in the units of the standard;
 - 4. A description of what caused the excess event;
 - 5. The strategy employed to minimize the excess event; and
 - 6. The strategy employed to prevent reoccurrence.
- E. A report certifying there were no excess emissions, if that is the case.

(24) **Semiannual Reporting** [06-096 C.M.R. ch. 140]

- A. The licensee shall submit to the Bureau of Air Quality semiannual reports which are due on **January 31st** and **July 31st** of each year. The facility's designated responsible official must sign this report.
- B. The semiannual report shall be considered on-time if the postmark of the submittal is before the due date or if the report is received by the Department within seven calendar days of the due date.
- C. Each semiannual report shall include a summary of the periodic and CAM monitoring required by this license.
- D. All instances of deviations from license requirements and the corrective action taken must be clearly identified and provided to the Department in summary form for each six-month interval.

(25) Annual Compliance Certification

Bucksport Generation shall submit an annual compliance certification to the Department and EPA in accordance with Standard Condition (13) of this license. The annual compliance certification is due **January 31st** of each year. The facility's designated responsible official must sign this report.

The annual compliance certification shall be considered on-time if the postmark of the submittal is before the due date or if the report is received by the Department within seven calendar days of the due date. Certification of compliance is to be based on the stack testing or monitoring data required by this license. Where the license does not require such data, or the license requires such data upon request of the Department and the Department has not requested the testing or monitoring, compliance may be certified based upon other reasonably available information such as the design of the equipment or applicable emission factors. [06-096 C.M.R. ch. 140]

(26) Annual Emission Statement

A. In accordance with *Emission Statements*, 06-096 C.M.R. ch. 137, Bucksport Generation shall annually report to the Department, in a format prescribed by the Department, the information necessary to accurately update the State's emission inventory. The emission statement shall be submitted as specified by the date in 06-096 C.M.R. ch. 137.

B. Bucksport Generation shall keep the following records in order to comply with 06-096 C.M.R. ch. 137:

1. The amount of each fuel fired in GEN4, BSEG #1 - #6, EG1, Fire Pump #1, and the Gas Heater (each) on a monthly basis.
2. The sulfur content of the distillate fuel fired in GEN4, BSEG #1 - #6, and Fire Pump #1; and
3. Hours each emission unit was active or operating on a monthly basis.

[06-096 C.M.R. ch. 137]

C. In reporting year 2020 and every third year thereafter, Bucksport Generation shall report to the Department emissions of hazardous air pollutants as required by 06-096 C.M.R. ch. 137, § (3)(C). Bucksport Generation shall pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3). [38 M.R.S. § 353-A(1-A)]

(27) **General Applicable State Regulations**

The licensee is subject to the State regulations listed below.

Origin and Authority	Requirement Summary	Enforceability
06-096 C.M.R. ch. 102	Open Burning	-
06-096 C.M.R. ch. 109	Emergency Episode Regulation	-
06-096 C.M.R. ch. 110	Ambient Air Quality Standard	-
06-096 C.M.R. ch. 116	Prohibited Dispersion Techniques	-
38 M.R.S. § 585-B, §§5	Mercury Emission Limit	Enforceable by State-only

(28) **Units Containing Ozone Depleting Substances**

When repairing or disposing of units containing ozone depleting substances, the licensee shall comply with the standards for recycling and emission reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for motor vehicle air conditioning units in Subpart B. Examples of such units include refrigerators and any size air conditioners that contain CFCs. [40 C.F.R. Part 82, Subpart F]

(29) **Asbestos Abatement**

When undertaking Asbestos abatement activities, Bucksport Generation shall comply with the *Standard for Asbestos Demolition and Renovation*, 40 C.F.R. Part 61, Subpart M.

(30) **Acid Rain**

Bucksport Generation shall continue to comply with the federal Acid Rain Program, *State Operating Permits Program*, 40 C.F.R. Part 70 and *Permits Regulation*, 40 C.F.R. Part 72, in accordance with the Phase II acid rain permit, A-22-70-A-S, issued on 3/17/1999.

(31) **CO₂ Budget Source**

Bucksport Generation shall continue to comply with the applicable requirements of licenses A-22-78-A-N (issued 1/15/2008) and A-22-78-B-A (issued 10/6/2015) per Maine's *CO₂ Budget Trading Program*, 06-096 C.M.R. ch. 156. [06-096 C.M.R. ch. 156]
Enforceable by State-only

(32) **Expiration of a Part 70 license**

A. Bucksport Generation shall submit a complete Part 70 renewal application at least six but no more than 18 months prior to the expiration of this air license.

B. Pursuant to Title 5 M.R.S. §10002, and 06-096 C.M.R. ch. 140, the Part 70 license shall not expire and all terms and conditions shall remain in effect until the Department takes

**Bucksport Generation LLC
Hancock County
Bucksport, Maine
A-22-70-D-R/A**

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**Departmental
Findings of Fact and Order
Part 70 Air Emission License
Renewal with Amendment**

final action on the renewal application of the Part 70 license. An existing source submitting a complete renewal application under 06-096 C.M.R. ch. 140 prior to the expiration of the Part 70 license will not be in violation of operating without a Part 70 license. **Enforceable by State-only**

(33) New Source Review

Bucksport Generation is subject to all previous New Source Review (NSR) requirements summarized in this Part 70 air emission license, and the NSR requirements remain in effect even if this 06-096 C.M.R. ch. 140 Air Emission License, A-22-70-D-R/A, expires.

DONE AND DATED IN AUGUSTA, MAINE THIS 29th DAY OF JUNE, 2020.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____ for
GERALD D. REID, COMMISSIONER

The term of this license shall be five (5) years from the signature date above.

[Note: If a complete renewal application, as determined by the Department, is submitted at least six but no more than 18 months prior to expiration of the facility's Part 70 license, then pursuant to Title 5 M.R.S. §10002, all terms and conditions of the Part 70 license shall remain in effect until the Department takes final action on the Part 70 license renewal application.]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 6/12/09

Date of application acceptance: 6/15/09

Date filed with the Board of Environmental Protection:

This Order prepared by Lynn Muzzey, Bureau of Air Quality.

