



DEPARTMENT ORDER

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

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

FINDINGS OF FACT

After review of the Part 70 License renewal application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes (M.R.S.) § 344 and § 590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

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

Bucksport Generation LLC (Bucksport Generation) is an electrical generating facility consisting of a combustion turbine and supporting equipment. As part of this renewal, the Department is also updating applicable requirements from *Visible Emission Regulation*, 06-096 C.M.R. ch. 101, which has been revised with an effective date of January 1, 2024.

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.

B. Emission Equipment

The following emission units are addressed by this Part 70 License:

Fuel Burning Equipment

Equipment	Maximum Heat Input Capacity	Max. Firing Rate	Fuel Type	Mfr. Date	Install. Date	Stack #
GEN4	1,963 MMBtu/hr	1.963 MMscf/hr	Natural Gas	2000	2000	Gen4
	2,082 MMBtu/hr	15,200 gal/hr	Distillate Fuel			
Gas Heater	4.1 MMBtu/hr	4,100 scf/hr	Natural Gas	2000	2000	Gas Heater

Generators

Equipment	Maximum Heat Input Capacity	Max. Firing Rate	Output	Fuel Type	Mfr. Date	Install. Date	Stack #
BSEG #1	19.12 MMBtu/hr	138 gal/hr	2,000 kW	Distillate Fuel	2018	2018	BSEG #1
BSEG #2	19.12 MMBtu/hr	138 gal/hr	2,000 kW	Distillate Fuel	2018	2018	BSEG #2
BSEG #3	19.12 MMBtu/hr	138 gal/hr	2,000 kW	Distillate Fuel	2018	2018	BSEG #3
BSEG #4	19.12 MMBtu/hr	138 gal/hr	2,000 kW	Distillate Fuel	2018	2018	BSEG #4
BSEG #5	19.12 MMBtu/hr	138 gal/hr	2,000 kW	Distillate Fuel	2018	2018	BSEG #5
BSEG #6	19.12 MMBtu/hr	138 gal/hr	2,000 kW	Distillate Fuel	2018	2018	BSEG #6
EG1	1.02 MMBtu/hr	1,020 scf/hr	70 kW	Natural Gas	2019	2019	Fugitive
Fire Pump #1	1.24 MMBtu/hr	9 gal/hr	175 HP	Distillate Fuel	1969	1969	Fugitive

Bucksport Generation has additional insignificant activities which are not listed in the emission equipment tables above. The list of insignificant activities can be found in the Part 70 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
CO	carbon monoxide
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
hp	horsepower
lb	pound
lb/hr	pounds per hour
lb/MMBtu	pounds per million British thermal units
lb/ton	pounds per ton
M.R.S.	Maine Revised Statutes
MMBtu	million British thermal units
MMBtu/hr	million British thermal units per hour
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 (filterable)
PM ₁₀	particulate matter less than 10 microns in diameter (filterable + condensable)
PM _{2.5}	particulate matter less than 2.5 microns in diameter (filterable + condensable)
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.

Fuel Transfer means the period of time during which the fuel fired in the turbine is switched from fuel oil to natural gas or from natural gas to fuel oil. This period ends when the turbine reaches steady state operation (as defined under the definition of turbine startup) after the

fuel switch. Aborted fuel transfer shall be included in this definition. Each fuel transfer period shall not exceed 120 minutes. [A-22-77-24-M (3/24/2023), BACT]

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

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

An engine is not a non-road (portable) engine if it remains or will remain at a location for more than 12 consecutive months or for a shorter period of time if sited at a seasonal source. A seasonal source is a source that remains in a single location for two years or more and which operates for fewer than 12 months in a calendar year. If an engine operates at a seasonal source for one entire season, the engine does not meet the criteria of a non-road (portable) engine and is subject to applicable stationary engine requirements.

Records or Logs mean either hardcopy or electronic records.

Turbine Startup means a period of time starting with initial combustion in GEN4 and ending when GEN4 reaches 65% rated load or greater and steady state operation is achieved.

When firing natural gas, *steady state operation* begins 15 minutes after the time when GEN4 is simultaneously in Mode 6 and the first one-minute block average for NO_x is 9 ppm or less.

When firing distillate fuel, *steady state operation* begins 30 minutes after the time when GEN4 first simultaneously achieves a one-minute block average for NO_x of 42 ppm or less and a one-minute block average for CO of 15 ppm or less.

In no case shall the alternate emission limits for turbine startup be applicable for more than 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 two (2) hours or less. A *warm start* shall be defined as startup when the generating unit has been

down for more than two (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. [A-22-77-24-M (3/24/2023), BACT]

Shutdown for GEN4 means a period of time starting when steady state operation ceases (i.e., GEN4 exceeds a normal operating limit for either NO_x or CO) and ending with cessation of combustion turbine firing, or when the turbine goes into a fired shutdown. Aborted shutdowns shall be included in this definition. Each shutdown period shall not exceed 60 minutes. [A-22-77-24-M (3/24/2023), BACT]

Turbine Re-tuning means that period of time from initiation of combustion turbine firing until two (2) hours after the computer has signaled the turbine reaching base load. This period shall not exceed 48 hours for each fuel. [(A-22-77-22-M (10/29/2019), BACT]

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 does not include any changes or revisions to the requirements in the Part 70 license; therefore, the license is considered to be a Part 70 License renewal issued under *Part 70 Air Emission License Regulations*, 06-096 Code of Maine Rules (C.M.R.) ch. 140.

F. Facility Description

Bucksport Generation operates a dual fuel gas turbine (GEN4) which may be operated either as 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.

G. General Facility Requirements

Bucksport Generation is subject to the 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

Citation	Requirement Title
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
06-096 C.M.R. ch. 144	National Emission Standards for Hazardous Air Pollutants
06-096 C.M.R. ch. 156	CO ₂ Budget Trading Program
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 63, Subpart ZZZZ	National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating 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

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.

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 emissions 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 stationary sources of nitrogen oxides (NO_x) that have the potential to emit quantities of NO_x equal to or greater than 100 tons per year. This chapter contains certain requirements for two different categories: sources that had the potential to emit quantities of NO_x equal to or greater than 100 tons/year prior to May 31, 1995; and newer facilities meeting the same emissions criteria and located in the 2022 Ozone Transport Region (OTR). None of the licensed emission units at Bucksport Generation that are capable of emitting greater than 100 tons/year of NO_x were installed prior to 1995. Further, Bucksport Generation is not located in the OTR. Therefore, this facility is not subject to 06-096 C.M.R. ch. 138.

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 tons/year from non-exempt equipment. Bucksport Generation does have the potential to emit quantities of VOC equal to or greater than 40 tpy; however, VOC emissions from the turbine, the fuel heater, the generators, and the fire pump result from incomplete combustion and are therefore exempt from inclusion when determining the facility's total VOC emissions from these units, pursuant to 06-096 C.M.R. ch. 134, § 1(C)(4). With these exclusions, the VOC emissions total from the facility is under the 40-tpy threshold. The rule is therefore not applicable 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. Bucksport Generation was issued an acid rain permit, A-22-70-A-S on March 17, 1999, and requirements of the acid rain permit are included in this Part 70 license renewal.

E. Mandatory Greenhouse Gas (GHG) Reporting

Federal regulation *Mandatory Greenhouse Gas Reporting*, 40 C.F.R. Part 98, is applicable to some facilities as addressed in *General Provisions, Who must report?*, 40 C.F.R. § 98.2. These are not considered "applicable requirements" for the purposes of Part 70 licenses. Therefore, this information is presented for informational purposes only.

F. Best Available Retrofit Technology (BART)

Bucksport Generation 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 January 15, 2008, in accordance with Maine's *CO₂ Budget Trading Program*, 06-096 C.M.R. ch. 156 for GEN4. This license was amended in license amendment A-22-78-B-A, issued October 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.

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. With limited exceptions, no person shall import, distribute, or offer for sale any distillate fuel with a sulfur content greater than

0.0015% by weight (15 ppm) pursuant to 38 M.R.S. § 603-A(2)(A)(3). 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 Stack GEN4, which has an inside diameter of 19 feet and a height of 250 feet above ground level (AGL).

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 January 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 calendar 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, § 1(B)(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

- a. 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, shutdown, fuel transfer, and turbine re-tuning 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)

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

Bucksport Generation shall maintain records of the date, time, and duration of any period of turbine startup, shutdown, fuel transfer, or turbine re-tuning.

3. New Source Performance Standards (NSPS)

Subpart GG

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

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* is the allowable NO_x emissions (percent by volume at 15% O₂ and on a dry basis);
Y is a function of the manufacturer's rated load (kilojoules per watt hour); and
F is a function of the 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 ppmdv for natural gas and 102 ppmdv 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)] All reports required under 40 C.F.R. § 60.7(c) must be electronically submitted via the Compliance and Emissions Data Reporting Interface (CEDRI) by the 30th day following the end of each 6-month period. [40 C.F.R. § 60.334(k)(1)]

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 International Organization for Standardization (ISO) standard conditions correction factor or a correction factor is not being used. [40 C.F.R. § 60.334(j)(1)(iii)(C)]

An hour of excess emissions 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).

Subpart KKKK

Due to GEN4 being installed in 2000, the unit is not subject to the NSPS titled *Standards of Performance for Stationary Combustion Turbines*, 40 C.F.R. Part 60, Subpart KKKK. These standards apply to stationary combustion turbines with a heat input capacity of 10 MMBtu/hr or more that are constructed, reconstructed, or modified after February 18, 2005. There have been no subsequent modifications to trip the applicability of this subpart. [See 40 C.F.R. § 60.2 “Modification.”]

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 YYYY, applies to a stationary combustion turbine located at a major source of HAP. Bucksport Generation is an area source of HAP. Therefore, 40 C.F.R. Part 63, Subpart YYYY 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 except for periods of startup, shutdown, fuel transfer, and turbine re-tuning), 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	A-22-77-22-M (10/29/2019), BACT	9 lb/hr
PM ₁₀	9 lb/hr	A-22-77-22-M (10/29/2019), BACT	9 lb/hr
PM _{2.5}	9 lb/hr	A-22-77-22-M (10/29/2019), BACT	9 lb/hr
SO ₂	12 lb/hr	A-22-77-22-M (10/29/2019), BACT	12 lb/hr
NO _x	110 ppm _{dv} @ 15% O ₂ (4-hr rolling average)	40 C.F.R. Part 60, Subpart GG	110 ppm _{dv} @ 15% O ₂ (4-hr rolling average)
	9 ppm _{dv} @ 15% O ₂ (24-hr block average)	A-22-77-22-M (10/29/2019), BACT	9 ppm _{dv} @ 15% O ₂ (24-hr block average)
	65 lb/hr	A-22-77-22-M (10/29/2019), BACT	65 lb/hr

Pollutant	Applicable Emission Standards	Origin and Authority	Licensed Emission Limits
CO	9 ppm _{dv} @ 15% O ₂ (24-hr block average)	A-22-77-22-M (10/29/2019), BACT	9 ppm _{dv} @ 15% O ₂ (24-hr block average)
	32 lb/hr	A-22-77-22-M (10/29/2019), BACT	32 lb/hr
VOC	3 lb/hr	A-22-77-22-M (10/29/2019), BACT	3 lb/hr
Visible Emissions	20% opacity (6-minute block average)	06-096 C.M.R. ch. 101 § 4(A)(4)	20% opacity (6-minute block average)

b. Short-Term Emission Limits When Firing Distillate Fuel

For GEN4, a listing of potentially applicable emission standards (when firing distillate fuel except for periods of startup, shutdown, fuel transfer, or turbine re-tuning), 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	A-22-77-22-M (10/29/2019), BACT	17 lb/hr
PM ₁₀	17 lb/hr	A-22-77-22-M (10/29/2019), BACT	17 lb/hr
PM _{2.5}	17 lb/hr	A-22-77-22-M (10/29/2019), BACT	17 lb/hr
SO ₂	3.15 lb/hr	A-22-77-22-M (10/29/2019), BACT	3.15 lb/hr
NO _x	102 ppm _{dv} @ 15% O ₂ (4-hr rolling average)	40 C.F.R. Part 60, Subpart GG	102 ppm _{dv} @ 15% O ₂ (4-hr rolling average)
	42 ppm _{dv} @ 15% O ₂ (24-hr block average)	A-22-77-22-M (10/29/2019), BACT	42 ppm _{dv} @ 15% O ₂ (24-hr block average)
	348 lb/hr	A-22-77-22-M (10/29/2019), BACT	348 lb/hr
CO	15 ppm _{dv} @ 15% O ₂ (24-hr block average)	A-22-77-22-M (10/29/2019), BACT	15 ppm _{dv} @ 15% O ₂ (24-hr block average)
	104 lb/hr	A-22-77-22-M (10/29/2019), BACT	104 lb/hr
VOC	8 lb/hr	A-22-77-22-M (10/29/2019), BACT	8 lb/hr
Visible Emissions	20% opacity (6-minute block average)	06-096 C.M.R. ch. 101 § 4(A)(4)	20% opacity (6-minute block average)

c. Annual Emission Limits

GEN4 is subject to the following annual emission limits:

Pollutant	Tons/year
PM	45.2
PM ₁₀	45.2
PM _{2.5}	45.2
SO ₂	46.1
NO _x	250.0
CO	120.0
VOC	16.8

6. Short-Term Emission Limit Compliance Methods

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

Pollutant	Applicable Emission Limit	Compliance Method	Frequency
PM	lb/MMBtu lb/hr	Stack Testing: 40 C.F.R. Part 60, App. A, Method 5	As requested
PM ₁₀	lb/hr	Stack Testing: 40 C.F.R. Part 60, App. A, Method 5 or EPA Test Method 201 or 201A, and Method 202	As requested
PM _{2.5}	lb/hr	Stack Testing: 40 C.F.R. Part 60, App. A, Method 5 or Method 201 or 201A, and Method 202	As requested
SO ₂	lb/hr	Firing rate and fuel sample analysis 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	As fuel is purchased
NO _x	ppmdv	NO _x CEMS	Continuously
	lb/hr	Stack Testing: 40 C.F.R. Part 60, Appendix A, Method 20	As requested
CO	ppmdv	CO CEMS	Continuously
	lb/hr	Stack Testing: 40 C.F.R. Part 60, Appendix A, Method 10 or 19	As requested
VOC	lb/hr	Stack Testing: 40 C.F.R. Part 60, Appendix A, Method 25 or 25A	As requested
Visible Emissions	% opacity on a 6-minute block average basis	40 C.F.R. Part 60, Appendix A, Method 9	As requested

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.

[A-22-77-22-M (10/29/2019), BPT]

- a. On a monthly basis, Bucksport Generation shall calculate and record the 12-month rolling total annual emissions (tons) from GEN4 for PM, PM₁₀, PM_{2.5}, SO₂, NO_x, and CO.
- b. Monthly emissions of PM, PM₁₀, and PM_{2.5} from GEN4 shall be based on the licensed PM, PM₁₀, and PM_{2.5} 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. Periodic Monitoring

Bucksport Generation shall record data and maintain records for the following periodic monitoring values for GEN4 and its associated air pollution control equipment whenever the equipment is operating.

- a. The number of hours GEN4 fires natural gas on a monthly basis.
[A-22-77-22-M (10/29/2019), BACT]
- b. The number of hours GEN4 fires distillate fuel on a monthly basis. Each hour in which GEN4 fired both natural gas and distillate fuel shall be counted as an hour of distillate fuel firing. [A-22-77-22-M (10/29/2019), BACT]
- c. Records of whether GEN4 is in simple-cycle or combined cycle mode for all operating hours. [A-22-77-22-M (10/29/2019), BACT]
- d. Fuel use for both natural gas and distillate fuel on a monthly basis.
[06-096 C.M.R ch. 137 and A-22-77-22-M (10/29/2019), BACT]
- e. Hourly NO_x CEMS data and daily total NO_x mass emissions.
[A-22-77-22-M (10/29/2019), BACT]
- f. Hours of operation, including startup, shutdown, and any other down time.
[06-096 C.M.R ch. 137 and A-22-77-22-M (10/29/2019), BACT]
- g. Date, time, and duration of each startup, shutdown, turbine re-tuning, and malfunction of GEN4. [A-22-77-24-M (3/24/2023), BACT]

- h. Any instances of malfunction of the air pollution control system. [A-22-77-22-M (10/29/2019), BACT]
- 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 the 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, PM_{2.5}, SO₂, NO_x, and CO. [A-22-77-22-M (10/29/2019), BACT]
- l. Monthly calculations of annual emissions (tons) on 12-month rolling total from GEN4 for VOC. [06-096 C.M.R. ch. 140, BPT]

9. Parameter Monitors

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

Parameter	Frequency	Origin and Authority
Natural Gas Firing Rate	Monitor: Continuously Record: Continuously	A-22-77-22-M (10/29/2019), BACT
Distillate Fuel Firing Rate	Monitor: Continuously Record: Continuously	
Water Injection Rate	Monitor: Continuously Record: Continuously	

10. CEMS

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-hour rolling average	40 C.F.R. Part 60, Subpart GG
	ppmdv	24-hour block average	A-22-77-22-M (10/29/2019), BACT
O ₂ CEMS	%	1-hour average	40 C.F.R. Part 60, Subpart GG
CO CEMS	ppmdv	24-hour block average	A-22-77-22-M (10/29/2019), BACT

K. BSEG #1 - #6

Bucksport Generation has six (6) black-start emergency generators, known as BSEG #1 - #6. Each BSEG is rated at 2 MW firing distillate fuel, and each unit 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. As black-start emergency engines, BSEG #1 - #6 provide the power necessary to start the facility's electric generation equipment in the event of a regional grid outage or in an emergency when access to power from the grid may not be possible.

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. *Stationary Generators*, 06-096 C.M.R. ch. 169

BSEG #1 - #6 were licensed prior to the effective date of *Stationary Generators*, 06-096 C.M.R. ch. 169 and are therefore exempt from this rule pursuant to section 3(B).

2. 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.

a. Emergency Engine Designation and Operating Criteria

Under Subpart IIII, a stationary reciprocating 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;
- Use of an engine to pump water in the case of fire, flood, natural disaster, or severe weather conditions; and

- Similar instances.

(2) Non-Emergency Situation Operation

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

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

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

[40 C.F.R. § 60.4211(f) and §60.4219]

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

(1) Manufacturer Certification Requirement

BSEG #1 - #6 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 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)]

3. 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. Pursuant to 40 C.F.R. § 63.6590(c), stationary compression ignition engines subject to regulations under 40 C.F.R. Part 60, Subpart IIII must meet the requirements of Subpart ZZZZ by meeting the requirements of 40 C.F.R. Part 60, Subpart IIII. No further requirements apply for such engines under Subpart ZZZZ. [40 C.F.R. § 63.6590(c)]

4. Emission Limits and Streamlining

For BSEG #1 - #6, a listing of potentially applicable emission standards, the origin and authority of the standards, 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)	0.12 lb/MMBtu
	2.3 lb/hr	A-22-77-22-M (10/29/2019), BACT	2.3 lb/hr
PM ₁₀	0.6 lb/hr	A-22-77-22-M (10/29/2019), BACT	0.6 lb/hr
PM _{2.5}	0.6 lb/hr	A-22-77-22-M (10/29/2019), BACT	0.6 lb/hr
SO ₂	0.03 lb/hr	A-22-77-22-M (10/29/2019), BACT	0.03 lb/hr
NO _x	42.5 lb/hr	A-22-77-22-M (10/29/2019), BACT	42.5 lb/hr
CO	4.0 lb/hr	A-22-77-22-M (10/29/2019), BACT	4.0 lb/hr
VOC	1.1 lb/hr	A-22-77-22-M (10/29/2019), BACT	1.1 lb/hr
Visible Emissions	20% opacity (6-minute block avg.)	06-096 C.M.R. ch. 101 § 4(A)(4)	20% opacity (6-minute block avg.)

5. Emission Limit Compliance Methods

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

6. Periodic Monitoring

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

- Hours of operating time on a calendar year basis. [06-096 C.M.R. ch. 137]
- Log of the duration and reasons for all operating times as they occur. [40 C.F.R. § 63.6655(f)]
- Records of all maintenance conducted. [40 C.F.R. § 63.6655(e)]
- Sulfur content of the distillate fuel fired. [A-22-70-D-R/A (06/29/2020), BPT]

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

1. Visible Emissions

a. Limit from A-22-77-22-M (10/29/2019), BACT

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 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 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.

[A-22-77-22-M (10/29/2019), BACT]

b. 06-096 C.M.R. ch. 101 § 4(A)(4)

Visible emissions from EG1 shall not exceed 20% opacity on a six-minute block average basis.

c. Streamlining

The Department has determined that the BACT visible emissions standard is more stringent than the 06-096 C.M.R. ch. 101 standard. Therefore, the visible emission limit has been streamlined to the more stringent BACT limit, except for during periods of startup, when 06-096 C.M.R. ch. 101 shall apply. Only this more

stringent limit shall be included in the Order of this air emission license. Streamlining the BACT limits with the federally enforceable limits in 06-096 C.M.R. ch. 101 makes the BACT limit federally enforceable.

2. *Stationary Generators*, 06-096 C.M.R. ch. 169

EG1 was licensed prior to the effective date of *Stationary Generators*, 06-096 C.M.R. ch. 169 and is therefore exempt from this rule pursuant to section 3(B).

3. New Source Performance Standards (NSPS)

Standards of Performance for Stationary 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]

a. Emergency Engine Designation and Operating Criteria

Under 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 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;
- 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. 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

The engine shall be limited to 100 hours/year for maintenance checks and readiness testing. Emergency engines may operate up to 50 hours per year in non-emergency situations, but those 50 hours are included in the 100 hours

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)]

4. 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 engines at an area HAP source. Pursuant to 40 C.F.R. § 63.6590(c), stationary spark ignition engines subject to regulations under 40 C.F.R. Part 60, Subpart JJJJ must meet the requirements of Subpart ZZZZ by meeting the requirements of 40 C.F.R. Part 60, Subpart JJJJ. No further requirements apply for such engines under Subpart ZZZZ. [40 C.F.R. § 63.6590(c)]

5. Emission Limits and Streamlining

For EG1, a listing of potentially applicable emission standards, the origin and authority of the standards, 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	A-22-77-22-M (10/29/2019), BACT	0.01 lb/hr
PM ₁₀	0.01 lb/hr	A-22-77-22-M (10/29/2019), BACT	0.01 lb/hr
PM _{2.5}	0.01 lb/hr	A-22-77-22-M (10/29/2019), BACT	0.01 lb/hr
SO ₂	negligible (based on 0.0015% sulfur, by weight)	A-22-77-22-M (10/29/2019), BACT	negligible
NO _x	2.32 lb/hr	A-22-77-22-M (10/29/2019), BACT	2.32 lb/hr
CO	3.58 lb/hr	A-22-77-22-M (10/29/2019), BACT	3.58 lb/hr
VOC	0.30 lb/hr	A-22-77-22-M (10/29/2019), BACT	0.30 lb/hr

6. 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.

7. Periodic Monitoring

Bucksport Generation shall record data and maintain records for the following periodic 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)]

8. Parameter Monitors

There are no Parameter Monitors required for EG1.

9. CEMS and COMS

There are no CEMS or COMS required for EG1.

M. Fire Pump #1

Bucksport Generation operates 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 capacity of approximately 1.24 MMBtu/hr.

1. *Stationary Generators*, 06-096 C.M.R. ch. 169

Fire Pump #1 was licensed prior to the effective date of *Stationary Generators*, 06-096 C.M.R. ch. 169 and is therefore exempt from this rule pursuant to section 3(B).

2. New Source Performance Standards (NSPS)

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

3. 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 engines (RICE) at an area HAP source and 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 these units 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;
- 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: <i>Fire Pump #1</i>	- Change oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; - Inspect the air cleaner every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and - Inspect all hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, 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 engine 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, Fire Pump #1 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)]

4. 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, 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	A-22-70-D-R/A (06/29/2020), BPT Enforceable by State-only	0.38 lb/hr Enforceable by State-only
PM ₁₀	0.38 lb/hr	A-22-70-D-R/A (06/29/2020), BPT Enforceable by State-only	0.38 lb/hr Enforceable by State-only
PM _{2.5}	0.38 lb/hr	A-22-70-D-R/A (06/29/2020), BPT Enforceable by State-only	0.38 lb/hr Enforceable by State-only
SO ₂	negligible (based on 0.0015% sulfur, by weight)	A-22-70-D-R/A (06/29/2020), BPT Enforceable by State-only	negligible
NO _x	5.47 lb/hr	A-22-70-D-R/A (06/29/2020), BPT Enforceable by State-only	5.47 lb/hr Enforceable by State-only
CO	1.18 lb/hr	A-22-70-D-R/A (06/29/2020), BPT Enforceable by State-only	1.18 lb/hr Enforceable by State-only
VOC	0.43 lb/hr	A-22-70-D-R/A (06/29/2020), BPT Enforceable by State-only	0.43 lb/hr Enforceable by State-only

b. Visible Emissions

Fire Pump #1 is subject to 06-096 C.M.R. ch. 101 and subject to the following standards.

Visible emissions from Fire Pump #1 shall not exceed an opacity of 20% on a six-minute block average basis, except during periods of startup. During periods of startup, the engine must meet the normal operating visible emissions standard or the or the following work practice standards and alternative visible emissions standard. Use of the following work practice standards and alternative visible emissions standard in lieu of the normal operating visible emissions standard is limited to no more than once per day.

- (1) The duration of the startup shall not exceed 30 minutes per event;
- (2) Visible emissions shall not exceed 50% opacity on a six-minute block average basis; and
- (3) Bucksport Generation shall keep records as of the date, time, and duration of each startup event.

Note: This does not limit the engine to one startup per day. It only limits the use of the alternative emission standard to once per day.

[06-096 C.M.R. ch. 101 § 4(A)(4)]

5. 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.

6. Periodic Monitoring

Bucksport Generation shall record data and maintain records for the following periodic 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. [A-22-70-D-R/A (06/29/2020), 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 New Source Review 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 recorder thermal energy in the form of steam and/or hot water.” [40 C.F.R. § 63.11237]

3. Emission Limits and Streamlining

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	A-22-77-22-M (10/29/2019), BACT	
	0.21 lb/hr	A-22-77-22-M (10/29/2019), BACT	0.21 lb/hr
PM ₁₀	0.21 lb/hr	A-22-77-22-M (10/29/2019), BACT	0.21 lb/hr
PM _{2.5}	0.21 lb/hr	A-22-77-22-M (10/29/2019), BACT	0.21 lb/hr
SO ₂	0.01 lb/hr	A-22-77-22-M (10/29/2019), BACT	0.01 lb/hr
NO _x	0.41 lb/hr	A-22-77-22-M (10/29/2019), BACT	0.41 lb/hr
CO	0.34 lb/hr	A-22-77-22-M (10/29/2019), BACT	0.34 lb/hr
VOC	0.02 lb/hr	A-22-77-22-M (10/29/2019), BACT	0.02 lb/hr
Visible Emissions	10% opacity on a six-minute average basis	06-096 C.M.R. ch. 101, § 4(A)(3)	10% opacity on a six-minute average basis *
	10% opacity on a six-minute average basis	A-22-77-22-M (10/29/2019), BACT	

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. Periodic Monitoring

Bucksport Generation shall record data and maintain records for the following periodic 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 monthly and calendar year basis.
[06-096 C.M.R. ch. 137]

6. Parameter Monitors

There are no Parameter Monitors required for the Gas Heater.

7. CEMS and COMS

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

O. Portable Engines

Bucksport Generation 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 a solvent cleaning machine, and there are not 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. General Process Emissions

Visible emissions from any general process source shall not exceed 20% opacity on a six-minute block average basis.

R. Fugitive Emissions

Bucksport Generation shall not cause emissions of any fugitive dust during any period of construction, reconstruction, or operation without taking reasonable precautions. Such reasonable precautions shall be included in the facility's continuing program of best management practices for suppression of fugitive particulate matter. See 06-096 C.M.R. ch. 101, § 4(C) for a list of potential reasonable precautions.

Bucksport Generation shall not cause or allow visible emissions within 20 feet of ground level, measured as any level of opacity and not including water vapor, beyond the legal boundary of the property on which such emissions occur. Compliance with this standard shall be determined pursuant to 40 C.F.R. Part 60, Appendix A, Method 22.

S. Performance Test Protocol

For any performance testing required by this license, Bucksport Generation shall submit to the Department for approval a performance test protocol, as outlined in the Department's Performance Testing Guidance, at least 30 days prior to the scheduled date of the performance test. [06-096 C.M.R. ch. 140, BPT]

The Department's Performance Testing Guidance is available online at <https://www.maine.gov/dep/air/emissions/testing.html>.

T. Emission Statements

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 and type of 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.

Every third year, or as requested by the Department, Bucksport Generation shall report to the Department emissions of hazardous air pollutants as required pursuant to 06-096 C.M.R. ch. 137, § (3)(C). The next report is due no later than May 15, 2027, for emissions occurring in calendar year 2026 and every three years subsequent to that date. 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)]

U. 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 and establishing the facility's potential to emit (PTE). Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, unquantifiable fugitive particulate matter emissions are not included except when required by state or federal regulations. Maximum potential emissions were calculated based on the following assumptions:

- An annual limit of 45.2 tpy of PM/PM₁₀/PM_{2.5} from GEN4;
- An annual limit of 46.1 tpy of SO₂ from GEN4;
- An annual limit of 250 tpy of NO_x from GEN4;
- An annual limit of 120 tpy of CO from GEN4;
- An annual limit of 16.8 tpy of VOC from GEN4;
- Operating the Gas Heater for 8,760 hr/year;
- Operating EG1 and Fire Pump #1 for 100 hrs/year each; and
- Operating BSEG #1 - #6 for 250 hr/year each.

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

Total Licensed Annual Emissions for the Facility Tons/year

(used to calculate the annual license fee)

	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	VOC
GEN4	45.2	45.2	45.2	46.1	250	120	16.8
Gas Heater	0.9	0.9	0.9	-	1.8	1.5	0.1
BSEG #1 - #6	1.7	1.7	1.7	-	31.9	3.0	0.8
EG1	-	-	-	-	0.1	0.2	-
Fire Pump #1	-	-	-	-	0.3	0.1	-
Total TPY	47.8	47.8	47.8	46.1	284.1	124.8	17.7

Pollutant	Tons/year
Single HAP	9.9
Total HAP	24.9

III. AMBIENT AIR QUALITY ANALYSIS

Bucksport Generation previously submitted an ambient air quality analysis demonstrating that emissions from the facility, in conjunction with all other sources, do not violate ambient air quality standards (see license A-22-77-4-A, issued on 11/29/2010). An additional ambient air quality analysis is not required for this 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-M-R 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) The Part 70 license does not convey any property rights of any sort, or any exclusive privilege. [06-096 C.M.R. ch. 140]
- (2) 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]

- (3) 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]
- (4) 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, rule, regulation, or Part 70 license requirement. [06-096 C.M.R. ch. 140]
- (5) Compliance with the conditions of this Part 70 license will 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 alters or affects 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 their renewal application.

Permit Shield Table

Source	Citation	Description	Basis for Determination
Facility	06-096 C.M.R. ch. 134	VOC RACT	Units exempt pursuant to § (1)(C)(4), and potential to emit from nonexempt sources is less than 40 TPY.
Facility	06-096 C.M.R. ch. 138	NO _x RACT	None of the licensed emission units installed prior to 1995 have the capability of producing more than 100 tpy of NO _x .
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	Standard 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	Standard 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 located at area source for HAP 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 applicability criteria.

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

- (6) 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 will 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]

- (7) No license revision or amendment is 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 safe 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). [06-096 C.M.R. ch. 140]
- (2) The licensee shall acquire a new or amended air emission license pursuant to 06-096 C.M.R. ch. 115 prior to commencing construction of a modification, unless specifically provided for in 06-096 C.M.R. ch. 140 or 06-096 C.M.R. ch. 115. [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. Payment of the annual air emission license fee for Bucksport Generation is due by the end of November of each year. [38 M.R.S. § 353-A(3)]
- (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 maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six years. In addition, the licensee shall retain records of all required monitoring data and support information for a period of at least six 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, 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 does not stay any condition of the Part 70 license. [06-096 C.M.R. ch. 140]
- (8) In accordance with the Department's Performance Testing Guidance and 40 C.F.R. Part 60 or other method approved or required by the Department, the licensee shall:
 - A. Submit to the Department for approval a test protocol at least 30 calendar days prior to the scheduled date of the emissions test, unless the Department agrees to a shorter submission timeframe;
 - B. Perform emissions testing under circumstances representative of the facility's normal process and operating conditions:
 - 1. Within 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 emissions testing.

- C. 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
- D. Submit a written report to the Department within 30 days from date of test completion, unless an extension is granted by the Department.

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

- (9) If the results of an emissions 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 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;
 - B. The days of violation will be presumed to include the date of the emissions 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 until a demonstration of compliance under normal and representative process and operating conditions is completed.

[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 Department within 48 hours of a violation of any emission standard 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 describing all violations of any emission standard.

Pursuant to 38 M.R.S. § 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 from permit requirements 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 by January 31 and July 31 of each year, or on an equivalent schedule specified in the license. 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 annually by January 31 of each year, 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.

The facility's designated responsible official must sign this report. 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]

SPECIFIC CONDITIONS

(14) GEN4

- A. Bucksport Generation's gas turbine facility, GEN4, 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 turbine generator (HRSG). [A-22-77-22-M (10/29/2019), BACT]
- 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. [A-22-77-22-M (10/29/2019), BACT]
- C. Fuels
 - 1. GEN4 is licensed to fire only natural gas and distillate fuel. [A-22-77-22-M (10/29/2019), BACT]
 - 2. Bucksport Generation shall not exceed the use of 21,587,040 gallons per calendar year of distillate fuel in GEN4. [A-22-77-22-M (10/29/2019), BACT]
 - 3. The facility shall not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm). [A-22-77-22-M (10/29/2019), BACT]
- D. Control Equipment
 - 1. Bucksport Generation shall operate GEN4 with water injection during the firing of distillate fuel for NO_x emissions control. [A-22-77-22-M (10/29/2019), BACT]
 - 2. The stack for GEN4 shall have a minimum stack height of 250 feet above ground level. [A-22-77-22-M (10/29/2019), BACT]

E. Emission Limits

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

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

Pollutant	Fuel	Limit	Origin and Authority	Enforceability
PM	-	0.06 lb/MMBtu	06-096 C.M.R. ch. 103, § 2(B)(1)(c)	Federally Enforceable
	Natural Gas	9 lb/hr	A-22-77-22-M (10/29/2019), BACT	
	Distillate Fuel	17 lb/hr		
PM ₁₀	Natural Gas	9 lb/hr		
	Distillate Fuel	17 lb/hr		
PM _{2.5}	Natural Gas	9 lb/hr		
	Distillate Fuel	17 lb/hr		
SO ₂	Natural Gas	12 lb/hr		
	Distillate Fuel	3.15 lb/hr		
NO _x	Natural Gas	65 lb/hr	40 C.F.R. Part 60, Subpart GG § 60.332(a)(1)	
		110 ppmdv @ 15% O ₂ 4-hr rolling avg.		
		9 ppmdv @ 15% O ₂ 24-hr block avg.	A-22-77-22-M (10/29/2019), BACT	
	Distillate Fuel	348 lb/hr	40 C.F.R. Part 60, Subpart GG § 60.332(a)(1)	
		102 ppmdv @ 15% O ₂ 4-hr rolling avg.		
		42 ppmdv @ 15% O ₂ 24-hr block avg.	A-22-77-22-M (10/29/2019), BACT	
CO	Natural Gas	32 lb/hr		
		9 ppmdv @ 15% O ₂ 24-hr block avg.		
	Distillate Fuel	104 lb/hr		
		15 ppmdv @ 15% O ₂ 24-hr block avg.		
VOC	Natural Gas	3 lb/hr		
	Distillate Fuel	8 lb/hr		

F. Visible Emissions

Visible emissions from GEN4 shall not exceed 20% opacity on a 6-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(4)]

G. Annual Emission Limits

Pollutant	Tons/year
PM	45.2
PM ₁₀	45.2
PM _{2.5}	45.2
SO ₂	46.1
NO _x	250.0
CO	120.0
VOC	16.8

H. Short-Term Emission Limit Compliance Methods

Compliance with the emission limits listed above shall be demonstrated in accordance with the following methods and frequencies, or other methods and frequencies as approved by the Department [06-096 C.M.R. ch. 140]:

Pollutant	Unit of Emission Standard	Compliance Method	Frequency
PM	lb/MMBtu	40 C.F.R. Part 60, App. A, Method 5	As requested
	lb/hr		As requested
PM ₁₀	lb/hr	40 C.F.R. Part 60, App. A, Method 5 or EPA Test Method 201 or 201A, and Method 202	As requested
PM _{2.5}	lb/hr	40 C.F.R. Part 60, App. A, Method 5 or EPA Test Method 201 or 201A, and Method 202	As requested
SO ₂	lb/hr	Firing rate and fuel sample analysis 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	As fuel is purchased
NO _x	lb/hr	40 C.F.R. Part 60, App. A, Method 20	As requested
	ppmdv	NO _x CEMS	Continuous
CO	lb/hr	40 C.F.R. Part 60, App. A, Method 10	As requested
	ppmdv	CO CEMS	Continuous
VOC	lb/hr	40 C.F.R. Part 60, App. A, Method 25 or 25A	As requested
Visible Emissions	% opacity on a 6-minute block avg. basis	40 C.F.R. Part 60, App. A, Method 9	As requested

I. Annual Limits Compliance Methods

1. On a monthly basis, Bucksport Generation shall calculate and record the 12-month rolling total annual emissions (tons) from GEN4 for PM, PM₁₀, PM_{2.5}, SO₂, NO_x, and CO. [A-22-77-22-M (10/29/2019), BACT]

2. Monthly emissions of PM, PM₁₀, and PM_{2.5} from GEN4 shall be based on the licensed PM, PM₁₀, and PM_{2.5} 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. [A-22-77-22-M (10/29/2019), BACT]
3. Monthly emissions of SO₂ from GEN4 shall be based on fuel flow monitoring (scf/month and gal/month) and the sulfur content of the fuel fired. [A-22-77-22-M (10/29/2019), BACT]
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. [A-22-77-22-M (10/29/2019), BACT]

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

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. [A-22-77-22-M (10/29/2019), BACT]

Turbine Startup, Shutdown, Fuel Transfer, and Turbine Re-Tuning as defined in the findings of fact of this license. [A-22-77-24-M (3/24/2023), BACT and A-22-77-22-M (10/29/2019), BACT]

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

Pollutant	Fuel	ppmdv	Average Time	Origin and Authority
NO _x	Natural Gas	200 @	1-hr block	A-22-77-22-M (10/29/2019), BACT
	Distillate Fuel	15% O ₂	1-hr block	
CO	Natural Gas	2,250 @	1-hr block	
	Distillate Fuel	15% O ₂	1-hr block	

K. Periodic Monitoring

Bucksport Generation shall record data and maintain records for the following periodic monitoring values for GEN4 and its associated air pollution control equipment whenever the equipment is operating.

1. The number of hours GEN4 fires natural gas on a monthly basis.
[A-22-77-22-M (10/29/2019), BACT]

2. The number of hours GEN4 fires distillate fuel on a monthly basis. Each hour in which GEN4 fired both natural gas and distillate fuel shall be counted as an hour of distillate fuel firing. [A-22-77-22-M (10/29/2019), BACT]
3. Records of whether GEN4 is in simple-cycle or combined cycle mode for all operating hours. [A-22-77-22-M (10/29/2019), BACT]
4. Fuel use for both natural gas and distillate fuel on a monthly basis. [06-096 C.M.R ch. 137 and A-22-77-22-M (10/29/2019), BACT]
5. Hourly NO_x CEMS data and daily total NO_x mass emissions. [A-22-77-22-M (10/29/2019), BACT]
6. Hours of operation, including startup, shutdown, and any other down time. [A-22-77-22-M, 10/29/2019), BACT]
7. Date, time, and duration of each startup, shutdown, turbine re-tuning, and malfunction of GEN4. [A-22-77-24-M (3/24/2023), BACT]
8. Any instances of malfunction of the air pollution control system. [A-22-77-22-M (10/29/2019), BACT]
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 the 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, PM_{2.5}, SO₂, NO_x, and CO. [A-22-77-22-M (10/29/2019), BACT]
12. Monthly calculations of annual emissions (tons) on 12-month rolling total from GEN4 for VOC. [06-096 C.M.R. ch. 140, BPT]

L. Parameter Monitors

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

Parameter	Monitoring Frequency	Recording Frequency
Natural Gas Firing Rate	Continuously	Continuously
Distillate Fuel Firing Rate	Continuously	Continuously
Water Injection Rate	Continuously	Continuously

[A-22-77-22-M (10/29/2019), BACT]

M. CEMS

1. Bucksport Generation shall operate and maintain the following continuous emission monitoring systems (CEMS) for GEN4 whenever the unit is operating:

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

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)]

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

The 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 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)] All reports required under 40 C.F.R. § 60.7(c) must be electronically submitted via the Compliance and Emissions Data Reporting Interface (CEDRI) by the 30th day following the end of each 6-month period. [40 C.F.R. § 60.334(k)(1)]

(15) BSEG #1 - #6

A. Allowable Operation and Fuels

1. BSEG #1 - #6 are licensed to fire distillate fuel. [06-096 C.M.R. ch. 140, BPT]
2. 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, maintenance, and other non-emergency purposes. Bucksport Generation shall maintain records documenting usage of BSEG #1 - #6 on a monthly and calendar year total basis. [A-22-77-22-M (10/29/2019), BACT]

B. Emissions shall not exceed the following limits:

Unit	Pollutant	lb/MMBtu	Origin and Authority
BSEG #1	PM	0.12	06-096 C.M.R. ch. 103 § (2)(B)(1)(a) and A-22-77-22-M (10/29/2019), BACT
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 limits [A-22-77-22-M (10/29/2019), BACT]:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
BSEG #1	2.30	0.60	0.60	0.03	42.50	4.00	1.10
BSEG #2	2.30	0.60	0.60	0.03	42.50	4.00	1.10
BSEG #3	2.30	0.60	0.60	0.03	42.50	4.00	1.10
BSEG #4	2.30	0.60	0.60	0.03	42.50	4.00	1.10
BSEG #5	2.30	0.60	0.60	0.03	42.50	4.00	1.10
BSEG #6	2.30	0.60	0.60	0.03	42.50	4.00	1.10

D. Visible Emissions

Visible emissions from each of the emergency generators shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(4)]

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

1. Manufacturer Certification

The engines shall be certified by the manufacturer as meeting the emission standards for new, emergency, nonroad compression ignition engines found in § 60.4202. [40 C.F.R. § 60.4205(b)]

2. Ultra-Low Sulfur Distillate Fuel

The distillate fuel fired in the engines shall not exceed 15 ppm sulfur (0.0015% sulfur by weight). 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. 140, BPT]

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, 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. 140, BPT]
- b. Bucksport Generation shall keep records that include 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. [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. [A-22-70-D-R/A (06/29/2020), BPT]

(16) EG1

A. EG1 is licensed to fire natural gas. [06-096 C.M.R. ch. 140, BPT]

B. Emissions shall not exceed the following limits [A-22-77-22M (10/29/2019), BACT]:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
EG1	0.01	0.01	0.01	-	2.32	3.58	0.30

C. Visible Emissions

Visible emission from EG1 shall not exceed 10% opacity on a six-minute block average basis except for periods of startup. [A-22-77-22-M (10/29/2019), BACT] During periods of startup, visible emissions shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch.101 § 4(A)(4)]

D. EG1 shall meet the applicable requirements of 40 C.F.R. Part 60, Subpart JJJJ, including the following:

1. Manufacturer Certification

The engine shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in 40 C.F.R. 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. 140, 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. 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. § 60.4245(b)]

4. 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. § 60.4243]

E. 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. Allowable Operation and Fuels

1. Fire Pump #1 is licensed to fire distillate fuel. [06-096 C.M.R. ch. 140, BPT]
2. The fuel oil sulfur content for Fire Pump #1 shall be limited to 0.0015% sulfur by weight. [06-096 C.M.R. ch. 140, BPT]
3. Fuel sulfur content compliance shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of fuel in the tank on-site. [06-096 C.M.R. ch. 140, BPT]

B. Emissions from Fire Pump #1 shall not exceed the following limits [A-22-70-D-R/A (6/29/2020), BPT]:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Fire Pump #1	0.37	0.37	0.37	-	5.47	1.18	0.43

C. 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 shall either meet the normal operating visible emissions standard or the following work practice standards and alternative visible emissions standard.

1. The duration of the startup shall not exceed 30 minutes per event;
2. Visible emissions shall not exceed 50% opacity on a six-minute block average basis; and
3. Bucksport Generation shall keep records of the date, time, and duration of each startup.

Use of the work practice standards and alternative visible emissions standard in lieu of the normal operating standard is limited to no more than once per day.

Note: This does not limit the engine to one startup per day. It only limits the use of the alternative emission standard to once per day.

[06-096 C.M.R. ch. 101, § 4(A)(4)]

D. Fire Pump #1 shall meet the applicable requirements of 40 C.F.R. Part 63, Subpart ZZZZ, including the following:

1. Bucksport Generation shall meet the following operational limitations for the compression ignition emergency engine (Fire Pump #1):
 - a. Change the oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first;
 - b. Inspect the air cleaner every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and
 - c. Inspect the hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary.

Records shall be maintained documenting compliance with the operational limitations.

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

E. 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. [A-22-70-D-R/A (06/29/2020), 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. [A-22-77-22-M (10/29/2019), BACT]

B. Gas Heater Emission Limits

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

Emissions from the Gas Heater shall not exceed the following limits:

Pollutant	lb/MMBtu	Origin and Authority
PM	0.05	A-22-77-22-M (10/29/2019), BACT

Pollutant	lb/hr	Origin and Authority
PM	0.21	A-22-77-22-M (10/29/2019), BACT
PM ₁₀	0.21	
SO ₂	0.01	
NO _x	0.41	
CO	0.34	
VOC	0.02	

C. Visible Emissions

Visible emissions from the Gas Heater shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(3)]

D. Periodic Monitoring

Bucksport Generation shall record data and maintain records for the following periodic 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 monthly and calendar year basis. [06-096 C.M.R. ch. 137]

(19) **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, § 4(B)(4)]

(20) **Fugitive Emissions**

- A. Bucksport Generation shall not cause emissions of any fugitive dust during any period of construction, reconstruction, or operation without taking reasonable precautions. Such reasonable precautions shall be included in the facility's continuing program of best management practices for suppression of fugitive particulate matter. See 06-096 C.M.R. ch. 101, § 4(C) for a list of potential reasonable precautions.

- B. Bucksport Generation shall not cause or allow visible emissions within 20 feet of ground level, measured as any level of opacity and not including water vapor, beyond the legal boundary of the property on which such emissions occur. Compliance with this standard shall be determined pursuant to 40 C.F.R. Part 60, Appendix A, Method 22.

[06-096 C.M.R. ch. 101, § 4(C)]

(21) **Performance Test Protocol**

For any performance testing required by this license, Bucksport Generation shall submit to the Department for approval a performance test protocol, as outlined in the Department's Performance Testing Guidance, at least 30 days prior to the scheduled date of the performance test. [06-096 C.M.R. ch. 140, BPT] **Enforceable by State-only**

(22) **Parameter Monitor General Requirements**

[06-096 C.M.R. chs. 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

(23) **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**

(24) Quarterly Reporting

The licensee shall submit a Quarterly Report to the Department within 30 days after the end of each calendar quarter, detailing the following for the control equipment, parameter monitors, and Continuous Emission Monitoring Systems (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.

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

Note: This semiannual report is separate from, and in addition to, any semiannual report required by specific NSPS or NESHAP regulations.

- A. The licensee shall submit to the Department 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 on or 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 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.

(26) Annual Emission Statements

- 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 and type of 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]

Bucksport Generation shall maintain records sufficient to complete and submit the annual emission statement as required by 06-096 C.M.R. ch. 137.

- C. Every third year, or as requested by the Department, Bucksport Generation shall report to the Department emissions of hazardous air pollutants as required pursuant to 06-096 C.M.R. ch. 137, § (3)(C). The next report is due no later than May 15, 2027, for emissions occurring in calendar year 2026 and every three years subsequent to that date. 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 Regulations	-
06-096 C.M.R. ch. 110	Ambient Air Quality Standards	-
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 requirements of license A-22-78-A-N, issued 1/15/2008, and A-22-78-B-A, issued 10/6/2015, in accordance with 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-M-R**

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

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**

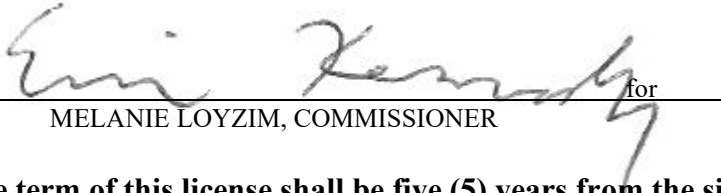
(33) New Source Review

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 Emissions License, A-22-70-M-R, expires.

DONE AND DATED IN AUGUSTA, MAINE THIS 14th DAY OF AUGUST, 2026.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:


MELANIE LOYZIM, 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: December 16, 2024

Date of application acceptance: December 16, 2024

This Order prepared by Zac Hicks, Bureau of Air Quality.