



DEPARTMENT ORDER

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

**Departmental  
Findings of Fact and Order  
Part 70 Air Emission License  
Amendment #1**

**FINDINGS OF FACT**

After review of the Part 70 License amendment 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 Administrative Revision
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. Bucksport Generation has requested a Part 70 administrative revision to incorporate New Source Review (NSR) minor revision A-22-77-24-M (issued 3/24/2023) which clarified the parameters that define when GEN4 has achieved “steady state operation” in regard to ending the applicability of alternative emission limits during periods of turbine startup, shutdown, and fuel transfer.

**B. Emission Equipment**

The following equipment is addressed in this Part 70 license:

**Fuel Burning Equipment**

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type, % sulfur
GEN4	1,963	1,963,000 scf/hr	natural gas, negligible
	2,082	15,200 gal/hr*	distillate fuel, 0.0015%

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

### C. Revision Description

GEN4 has established alternate emission limits for NO<sub>x</sub> and CO during periods of startup, shutdown, and fuel transfer. These periods end or begin (as applicable) when GEN4 achieves steady state operation, which is when the unit reliably maintains its normal operating limits. However, when this definition was established, Bucksport Generation's license failed to account for any averaging time or minimum duration. When GEN4 approaches steady state operations, emissions may fluctuate for a short period of time both above and below the normal operating limits. Additionally, the current definition of startup refers to reaching "Mode 6" which is a condition that does not exist when firing distillate fuel.

NSR license A-22-77-24-M (issued 3/24/2023) clarified the definitions of turbine startup, shutdown, and fuel transfer, which use the term "steady state" operation, such that the alternative emission limits continue to apply for a short period of time to allow operations to settle out. The definitions of turbine startup, shutdown, and fuel transfer were clarified to read as follows:

*Turbine startup* shall be defined as 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 1-minute block average for NO<sub>x</sub> is 9 ppm or less.

When firing distillate fuel, *steady state operation* begins 30 minutes after the time when GEN4 first simultaneously achieves a 1-minute block average for NO<sub>x</sub> of 42 ppm or less and a 1-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 2 hours or less. A warm start shall be defined as startup when the generating unit has been down for more than 2 hours and less than or equal to 48 hours. A cold start shall be defined as startup when the generating unit has been down for more than 48 hours.

*Shutdown* shall be defined as a period of time starting when steady state operation ceases (i.e., GEN4 exceeds a normal operating limit for either NO<sub>x</sub> 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.

*Fuel transfer* shall be defined as 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 for turbine startup) after the fuel switch. Aborted fuel transfers shall be included in this definition. Each fuel transfer period shall not exceed 120 minutes.

To demonstrate compliance, Bucksport Generation is required to keep records of the date, time, and duration of any period of turbine startup, shutdown, or fuel transfer.

Bucksport Generation has requested a Part 70 administrative revision to incorporate these clarifications into their Part 70 license.

#### **D. 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.

A Part 70 Administrative Revision is for license changes that correct typographical errors; change the name, address, or phone number of any person or facility identified in the Part 70 license or a similar administrative change at the Part 70 source; or result in more frequent monitoring, reporting, recordkeeping or testing requirements.

The requested revision to incorporate clarification of the definitions of turbine startup, shutdown, and fuel transfer meets the definition of a Part 70 Administrative Revision and has been processed under *Part 70 Air Emission License Regulations*, 06-096 C.M.R. ch. 140.

#### **E. Facility Annual Emissions**

This license amendment will not change the facility's licensed annual emissions.

### **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 Amendment A-22-70-L-A pursuant to 06-096 C.M.R. 140 and the preconstruction permitting requirements of *Major and Minor Source*

*Air Emission License Regulations*, 06-096 C.M.R. ch. 115 and subject to the conditions found in Air Emission License A-22-70-D-R/A and the following conditions.

Federally enforceable conditions in this Part 70 license must be changed pursuant to the applicable requirements in 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 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 Amendment or part thereof shall not affect the remainder of the provision or any other provisions. This License Amendment shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

## SPECIFIC CONDITIONS

**The following shall replace Conditions (14)(I)(3), (4), and (5) of Air Emission License A-22-70-D-R/A:**

### (14) GEN4

#### I. Turbine Startup, Shutdown, Fuel Transfer, Turbine Cleaning, and Re-Tuning

3. *Turbine startup* shall be defined as 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 1-minute block average for NO<sub>x</sub> is 9 ppm or less.

When firing distillate fuel, *steady state operation* begins 30 minutes after the time when GEN4 first simultaneously achieves a 1-minute block average for NO<sub>x</sub> of 42 ppm or less and a 1-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 2 hours or less. A warm start shall be defined as startup when the generating unit has been down for more than 2 hours and less than or equal to 48 hours. A cold start shall be defined as startup when the generating unit has been down for more than 48 hours.

4. *Shutdown* shall be defined as a period of time starting when steady state operation ceases (i.e., GEN4 exceeds a normal operating limit for either NO<sub>x</sub> 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.
5. *Fuel transfer* shall be defined as 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 for turbine startup) after the fuel switch. Aborted fuel transfer shall be included in this definition. Each fuel transfer period shall not exceed 120 minutes.

[06-096 C.M.R. ch. 115, (A-22-77-24-M, 3/24/2023)]

**The following shall replace Condition (14)(J)(7) of Air Emission License A-22-70-D-R/A:**

J. Periodic Monitoring

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

7. Date, time, and duration of each startup, shutdown, malfunction, and fuel transfer period for GEN4. [06-096 C.M.R. ch. 115, (A-22-77-24-M, 3/24/2023)]

DONE AND DATED IN AUGUSTA, MAINE THIS 24<sup>th</sup> DAY OF MARCH, 2023.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:  for  
MELANIE LOYZIM, COMMISSIONER

**The term of this amendment shall be concurrent with the term of Air Emission License A-22-70-D-R/A.**

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 2/16/2023

Date of application acceptance: 2/17/2023

Date filed with the Board of Environmental Protection:

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

