



**DEPARTMENT ORDER**

**Bucksport Generation LLC  
 Hancock County  
 Bucksport, Maine  
 A-22-77-23-M**

**Departmental  
 Findings of Fact and Order  
 New Source Review  
 Minor Revision**

**FINDINGS OF FACT**

After review of the air emission 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 (the Department) finds the following facts:

**I. REGISTRATION**

A. Introduction

FACILITY	Bucksport Generation LLC (Bucksport Generation)
LICENSE TYPE	06-096 C.M.R. ch. 115, Minor Revision
NAICS CODES	221112
NATURE OF BUSINESS	Fossil Fuel Electric Power Generation
FACILITY LOCATION	2 River Road, Bucksport, Maine

B. NSR License Description

Bucksport Generation has requested a New Source Review (NSR) license to:

1. Revise the definition of “steady state operation” when firing distillate fuel in GEN4.
2. Clarify the facility’s status as a natural area source of hazardous air pollutants (HAP).
3. Remove obsolete conditions for demolition activities.

C. Emission Equipment

The following equipment is addressed in this NSR 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.

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.

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 submitted by Bucksport Generation does not violate any applicable federal or state requirements and does not reduce monitoring, reporting, testing, or recordkeeping requirements.

The proposed revision will not increase emissions of any licensed pollutant. Therefore, the NSR license is determined to be a minor revision under *Minor and Major Source Air Emission License Regulations* 06-096 Code of Maine Rules (C.M.R.) ch. 115. The procedures found in 06-096 C.M.R. ch. 115 can be utilized to process this application since the proposed revision is not prohibited by the Part 70 air emission license. An application to incorporate the requirements of this NSR license into the Part 70 air emission license has been submitted to the Department.

II. **BEST PRACTICAL TREATMENT (BPT)**

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 C.M.R. ch. 100. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in 06-096 C.M.R. ch. 100. BACT is a top-down approach to selecting air emission controls considering economic, environmental, and energy impacts.

B. GEN4 Startup

GEN4 has alternate emission limits for NO<sub>x</sub> and CO during periods of startup, shutdown, and fuel transfer periods.

*Startup* is defined as that period of time from initial combustion in GEN4 until the unit reaches “Mode 6” and steady state load operation. This period shall not exceed 90 minutes for a hot start, 180 minutes for a warm start, or 240 minutes for a cold start. A *hot start* is defined as startup when the generating unit has been down for 2 hours or less. A *warm start* is 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* is defined as startup when the generating unit has been down for more than 48 hours.

*Shutdown* is defined as that period of time from steady state operation to cessation of combustion turbine firing, or when the turbine goes into a fired shutdown.

When firing natural gas, *steady state operation* is defined as when NO<sub>x</sub> emissions from GEN4 reach 9 ppm or less (i.e., when GEN4 is capable of meeting its normal operation emission standard).

When firing distillate fuel, *steady state operation* was previously defined as when the combustion turbine water injection rate reaches steady sustainable load (defined as 20 gpm). For clarity and consistency, Bucksport Generation has requested that the definition of steady state operation when firing distillate fuel be revised to be when NO<sub>x</sub> emissions from GEN4 reach 42 ppm or less (i.e., when GEN4 is capable of meeting its normal operation emission standard). The Department approves of this revision. Bucksport Generation shall continue to monitor water injection rate as currently licensed as a method of demonstrating that this control strategy is operating effectively and efficiently.

C. HAP Limits

Bucksport Generation is subject to annual, facility-wide emission limits of 9.9 ton per year (tpy) for any single HAP and 24.9 tpy for all HAP combined. These emission limits are on a 12-month rolling total basis and are included to ensure the facility remains classified as an area (i.e., minor) source of HAP since the facility previously included several other large fuel burning and process emission units.

However, with the removal of the facility’s boilers, the maximum facility-wide potential to emit (PTE) is significantly less than the licensed limits. Assuming GEN4 fires natural gas for 8,760 hours/year, maximum PTE for a single HAP is 6.1 tpy (formaldehyde) and 12.1 tpy for all HAP combined. Assuming GEN4 fires the maximum licensed amount of distillate fuel (21,587,000 gal/year), maximum PTE for a single HAP is 1.2 tpy (manganese) and 3.4 tpy for all HAP combined. The two scenarios combined (which is not physically possible) is also less than the major source threshold for HAP. Emissions of

HAP from the black start emergency engines and other currently licensed equipment were determined to be negligible.

It is not physically possible for Bucksport Generation to exceed the major source thresholds for HAP without violating other license conditions (e.g., federally-enforceable fuel limits). Therefore, the annual, facility-wide HAP emission limits contained in Bucksport Generation's license are determined to be obsolete and no longer necessary.

D. Demolition Activities

NSR license A-22-77-22-M (10/29/2019) includes Conditions associated with facility demolition activities. Demolition activities at the former mill site have ceased, and these conditions are considered obsolete.

E. Incorporation Into the Part 70 Air Emission License

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

F. Annual Emissions

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

**III. AMBIENT AIR QUALITY ANALYSIS**

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

**ORDER**

The Department hereby grants New Source Review Minor Revision A-22-77-23-M pursuant to the preconstruction licensing requirements of 06-096 C.M.R. ch. 115 and subject to the standard and specific conditions below.

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 Condition (1)(N)(3) of NSR License A-22-77-22-M:**

**(1) GEN4**

N. Turbine Startup, Shutdown, Fuel Transfer, Turbine Cleaning, and Re-Tuning  
[06-096 C.M.R. ch. 115, (BACT)]

3. *Turbine startup* shall be defined as that period of time from initial combustion in GEN4 until the unit reaches “Mode 6” and steady state load operation. When firing natural gas, steady state operation shall be defined as when the GEN4 turbine NO<sub>x</sub> emissions reach 9 ppm or less. When firing distillate fuel, steady state operation shall be defined as when the GEN4 turbine NO<sub>x</sub> emissions reach 42 ppm or less. Aborted startups shall be included in this definition.

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

**Bucksport Generation LLC  
Hancock County  
Bucksport, Maine  
A-22-77-23-M**

**Departmental  
Findings of Fact and Order  
New Source Review  
Minor Revision**

**Condition (2) of NSR License A-22-77-22-M regarding Demolition Activities is Deleted.**

**Condition (3) of NSR License A-22-77-22-M regarding Facility-Wide HAP Emission Limits is Deleted.**

DONE AND DATED IN AUGUSTA, MAINE THIS 1st DAY OF MAY, 2020.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_ for  
GERALD D. REID, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 3/16/2020

Date of application acceptance: 3/16/2020

Date filed with the Board of Environmental Protection:

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

**FILED**  
**MAY 1, 2020**  
**State of Maine**  
**Board of Environmental Protection**