



DEPARTMENT ORDER

Maritimes & Northeast Pipeline, L.L.C.
Hancock County
Township T35 MD, Maine
A-955-71-F-R

Departmental
Findings of Fact and Order
Air Emission License
Renewal

FINDINGS OF FACT

After review of the air emission 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

Maritimes & Northeast Pipeline, L.L.C. (M&N) has applied to renew its Air Emission License for the operation of emission sources associated with its natural gas compressor station.

The equipment addressed in this license is located off of Stud Mill Road in Township T35 MD. This facility is also known as the Woodchopping Ridge Compressor Station.

B. Emission Equipment

The following equipment is addressed in this air emission license renewal:

Fuel Burning Equipment

| Equipment | Max. Capacity (MMBtu/hr)* | Maximum Firing Rate (scf/hr)* | Fuel Type | Date of Manf./ Install | Stack # |
|------------------|----------------------------------|--------------------------------------|------------------|-------------------------------|----------------|
| Turbine #1 | 174.9 | 171,492 | natural gas | 2008 | 1 |
| Generator #1 | 5.02 | 4,920 | natural gas | 2008 | 2 |
| Generator #2 | 5.02 | 4,920 | natural gas | 2008 | 3 |
| Generator #3 | 5.02 | 4,920 | natural gas | 2008 | 4 |
| Boiler #1 | 3.5 | 3,432 | natural gas | 2008 | 5 |

* Based on a heating value of 1,020 Btu/scf.

M&N may operate small stationary engines smaller than 0.5 MMBtu/hr. These engines are considered insignificant activities and are not required to be included in this license. However, they are still subject to applicable State and Federal regulations. More

information regarding requirements for small stationary engines is available on the Department's website at the link below.

<http://www.maine.gov/dep/air/publications/docs/SmallRICEGuidance.pdf>

Additionally, M&N may operate portable engines used for maintenance or emergency-only purposes. These engines are considered insignificant activities and are not required to be included in this license. However, they may still be subject to applicable State and Federal regulations.

C. Definitions

Low Load Operation means periods of operation during maintenance activities of the turbine that require operation at low load with SoLoNO_xTM Disabled, as recommended by the manufacturer.

Low Temperature Operation means operation at or below an ambient temperature of 0 °F.

Normal Operation means operation when SoLoNO_xTM is Enabled and Active at temperatures above 0 °F. During normal operation, the majority of fuel fired in the turbines is lean-premixed fuel, and the balance is pilot fuel. At these times, the turbine is considered to be achieving vendor guaranteed emissions rates, as indicated by the SoLoNO_xTM system being both Enabled and Active.

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.

Shutdown means the time from when SoLoNO_xTM becomes Inactive to the end of fuel combustion.

Startup means the time from the start of fuel combustion to the time that SoLoNO_xTM becomes Active.

Transient Event means a period of time when SoLoNO_xTM is Enabled but also Inactive.

D. Application Classification

All rules, regulations, or statutes referenced in this air emission license refer to the amended version in effect as of the date this license was issued.

The application for M&N does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of currently licensed emission units only and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (C.M.R.) ch. 115.

E. Facility Classification

With the annual facility-wide emission limits the facility is licensed as follows:

- As a synthetic minor source of air emissions for criteria pollutants, because M&N is subject to license restrictions that keep facility emissions below major source thresholds for NO_x, CO, and VOC; and
- As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for HAP.

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.

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. Turbine #1

M&N operates Turbine #1, a Solar Titan Model 130-20502S3 (Titan 130) combustion turbine. It provides direct drive power to run a compressor used to recompress and move natural gas through the transmission pipeline. Turbine #1 has an approximate heat input of 174.9 MMBtu/hr firing natural gas and exhausts through its own stack.

Turbine #1 was manufactured in 2008. The last compliance test for NO_x was performed on February 2, 2023.

Turbine #1 is equipped with SoLoNO_xTM Combustion Technology which combines premixing and lean fuel-air mixtures with a two-stage combustion zone, thereby reducing the flame temperature and consequently thermal NO_x formation.

1. 40 C.F.R. Part 60, Subpart KKKK

Turbine #1 is subject to *Standards of Performance for Stationary Combustion Turbines*, 40 C.F.R. Part 60, Subpart KKKK since it was constructed after February 18, 2005.

Turbines which are subject to 40 C.F.R. Part 60, Subpart KKKK are exempt from the requirements of *Standards of Performance for Stationary Gas Turbines*, 40 C.F.R. Part 60, Subpart GG pursuant to § 60.4305(b).

a. Standards

(1) Nitrogen Oxides NO_x

Pursuant to Table 1 of Subpart KKKK, Turbine #1 is subject to a NO_x emission limit of 25 ppm at 15% O₂ during operation at or above 75% of peak load and at temperatures at or above 0 °F. However, the BPT limit for NO_x emissions is more stringent, and therefore, only the most stringent limit is contained in this license.

For operating loads less than 75% of peak load or temperatures below 0 °F, Table 1 of Subpart KKKK limits NO_x emissions to 150 ppm at 15% O₂.

(2) Sulfur Dioxide (SO₂)

M&N has elected to comply with an SO₂ emission limit of 0.060 lb/MMBtu pursuant to 40 C.F.R. § 60.4330(a)(2).

b. Performance Testing

- (1) Pursuant to 40 C.F.R. § 60.4340(a), M&N must conduct annual performance tests for NO_x unless the results of the previous performance test is less than or equal to 75% of the emission limit contained in Subpart KKKK, in which case M&N must conduct performance testing for NO_x at least once every two years with no more than 26 calendar months between tests. Because Turbine #1 is subject to a BPT emission limit for NO_x that is less than 75% of the Subpart KKKK emission limit, it is anticipated that M&N will always be subject to performance testing on a two-year schedule. The next performance test is due no later than April 30, 2025.
- (2) Performance testing for NO_x shall be done at any load condition within plus or minus 25% of 100% of peak load. M&N shall conduct three separate test runs for each performance test. The minimum run time shall be 20 minutes. The ambient temperature shall be greater than 0 °F during the performance test.
[40 C.F.R. § 60.4400(b)]
- (3) Performance tests for SO₂ shall be conducted on an annual basis with no more than 14 calendar months between tests. [40 C.F.R. §§ 60.8(a) & 60.4415(a)]

M&N may conduct performance tests for SO₂ by collecting a representative sample of natural gas in accordance with ASTM D5287 and analyzing the sample for the total sulfur content of the fuel using ASTM D1072 or other procedures allowed by Subpart KKKK. The fuel analysis may be performed by M&N, a service contractor, the fuel vendor, or other qualified agency.
[40 C.F.R. § 60.4415(a)(1)]

M&N intends to comply with the performance test requirement for SO₂ by producing a tariff sheet from the fuel vendor that contains documentation the method of sampling and analyzing the natural gas for total sulfur content of the fuel complies with the methods specified by 40 C.F.R. § 60.4415(a)(1).

c. Recordkeeping

M&N shall maintain a current gas tariff sheet establishing gas quality, which documents the total sulfur content is 20 grains of sulfur or less per 100 scf of gas.
[40 C.F.R. § 60.4365(a)]

2. Turbine Replacement

M&N's license allows for the replacement of turbine core components with like-kind equipment without triggering additional licensing requirements or the need for a licensing action. Such a replacement involves the replacement of modular turbine core components and not the entire "stationary combustion turbine" which makes up the

affected facility as defined by New Source Performance Standards (NSPS). In order to constitute a modification or reconstruction, the change would have to either result in an increase in emissions or exceed 50% of the fixed capital cost of a new facility. The replacement of the turbine core components does not meet either of these criteria.

Since the affected facility will not have been considered to be modified or reconstructed, M&N is not required to submit notification to EPA of turbine component replacement nor are they required to perform initial compliance testing after component replacement due to the NSPS. However, M&N shall notify the Department when a replacement occurs, and the Department is not precluded from requiring compliance performance testing at any time.

3. Operation at Low Temperatures

The turbine control system is programmed to increase pilot fuel when the ambient temperature drops below 0 °F to maintain combustion stability. As a result, emissions increase at these temperatures. This license includes provisions for increased emissions during periods when the ambient temperature is below 0 °F. Annual emissions estimates conservatively assume Turbine #1 will operate up to 211 hours/year at temperatures between 0 °F and -20 °F and three hours per year of at temperatures below -20 °F. Emissions from operation at low temperatures are to be included when demonstrating compliance with the facility's annual emission limits.

4. Startup/Shutdown and Transient Events

As discussed in the BPT section below, emissions of NO_x, CO, and VOC are controlled using Solar's SoLoNO_xTM which is a technology based on dry, lean-premixed combustion.

SoLoNO_xTM can be either Enabled or Disabled, essentially either on or off. SoLoNO_xTM is typically Disabled during low load conditions such as startup and shutdown, as well as during low-temperature events (see Definitions section) and low load operation as recommended by the manufacturer. The control system for Turbine #1 is equipped with an interlock which prevents operating in SoLoNO_xTM Disabled mode except for periods of startup, shutdown, low-temperature, and low load operation as recommended by the manufacturer. Startup and shutdown events are estimated to take approximately nine minutes each with no more than 2 startups and 2 shutdowns in any given hour, for a total of approximately 18 minutes of startup and 17 minutes of shutdown in an hour.

When Enabled, SoLoNO_xTM can be either Active or Inactive. A transient event occurs when SoLoNO_xTM is Enabled but Inactive. These are infrequent periods of short duration (typically a few minutes or less) when the turbine is not achieving the emissions guarantee provided by Solar. These periods occur as a result of the turbine losing combustion stability in the lean premix mode. To stabilize combustion, the

turbine control system increases the pilot fuel to the combustion chamber resulting in higher emissions until stable lean premix mode can be achieved again. The cause of transient events is usually outside the control of M&N, e.g., a bump/drop in pipeline pressure due to a large facility coming on/off-line.

M&N will continuously monitor the SoLoNO_xTM system and whether it is Enabled/Disabled and Active/Inactive. M&N shall keep records of the date, time, and duration of all startups and shutdowns. In calculating compliance with the facility's annual emission limits, M&N shall determine the amount of operating time the turbine spent in each mode and calculate emissions based on the following:

| Mode | Calculate Emissions Using Emission Factors Based On... |
|------------------|--|
| Startup | Emissions data supplied by the turbine manufacturer at the time of the most recent permit application. |
| Shutdown | Emissions data supplied by the turbine manufacturer at the time of the most recent permit application. |
| Normal Operation | Licensed emission limits for temperatures above 0 °F. |
| Low Temperature | Licensed emission limits for appropriate temperature range. |
| Transient Event | Licensed emission limits for temperatures less than or equal to -20 °F. |

5. BPT Findings

The following control strategies represent BPT for Turbine #1:

| | |
|--|---|
| PM/PM ₁₀ /PM _{2.5} | Good Combustion Practices |
| SO ₂ | Firing of Pipeline Quality Natural Gas |
| NO _x | SoLoNO _x TM Combustion Technology |
| CO | SoLoNO _x TM Combustion Technology |
| VOC | SoLoNO _x TM Combustion Technology |
| HAP | Good Combustion Practices |

The BPT emission limits for the turbine were based on the following:

a. Particulate Matter (PM, PM₁₀, PM_{2.5})

BPT for PM emissions from Turbine #1 consists of firing pipeline quality natural gas exclusively and good combustion practices. Units firing fuels with low ash content and high combustion efficiency exhibit low particulate matter emissions. The most stringent particulate control method demonstrated for gas turbines is the use of low ash fuel such as natural gas. Thus, firing of only pipeline quality natural gas represents BPT.

Turbine #1 is fuel burning equipment with a rated capacity greater than 3 MMBtu/hr; and therefore subject to *Fuel Burning Equipment Particulate*

Emission Standard, 06-096 C.M.R. ch. 103. It is subject to a PM emission limit of 0.08 lb/MMBtu pursuant to § 2(B)(1)(b) of this rule, because it has a maximum heat input capacity between 50 and 250 MMBtu/hr and fires natural gas. Turbine #1 is subject to a lb/hr PM emission limit that corresponds to a much lower lb/MMBtu level than 0.08 lb/MMBtu; therefore, the Department finds that Turbine #1 meets the Ch. 103 PM emission limit by meeting the PM lb/hr emission limit in the table below.

b. Sulfur Dioxide

Sulfur Dioxide (SO₂) is formed from the oxidation of sulfur in fuel. The most stringent method of control for SO₂ that has been demonstrated for gas-fired turbines is firing pipeline quality natural gas.

c. Nitrogen Oxides

Nitrogen Oxides (NO_x) emitted from combustion turbines result from the oxidation of both fuel bound nitrogen and atmospheric nitrogen (thermal NO_x). Natural gas has very low fuel bound nitrogen. Therefore, reducing NO_x emissions must focus on reducing the thermal NO_x component. M&N uses SoLoNO_xTM combustion technology, which employs lean-premixed combustion techniques. The premixing of fuel and air upstream of the combustor primary zone helps to ensure that the flame operates at a fuel-lean condition, thus lowering flame temperature and minimizing thermal NO_x formation.

The Department determined BPT for NO_x emissions consists of operating Turbine #1 with SoLoNO_xTM combustion technology. New Source Performance Standards (NSPS), 40 C.F.R. Part 60, Subpart KKKK contains a NO_x emission limit. The BPT emission limits for NO_x for all ambient temperatures as listed in the table below have been determined to be more stringent than the NSPS limit.

d. Carbon Monoxide

Carbon Monoxide (CO) results from the incomplete combustion of gas in the turbine.

The gas turbine uses a dry low-NO_x combustor system, integrates sophisticated burner controls with staged premixed combustion zones, and uses fuel feed systems to achieve the required low-NO_x emissions. Additional CO reductions are attributed to the SoLoNO_xTM technology.

The Department determined M&N's use of SoLoNO_xTM combustion technology and associated good combustion practices and instrumentation and controls for CO along with the ambient temperature specific limits contained in the table below, represents BPT.

e. Volatile Organic Compounds

The majority of volatile organic compounds (VOC) emitted from gas-fired turbines comes from unburned hydrocarbons. Control of VOC is accomplished by providing adequate fuel residence time and high temperature in the combustion zone to ensure complete combustion. The Department determined that BPT for VOC is using the SoLoNO_xTM combustion technology along with the ambient temperature specific limits contained in the table below.

6. Summary of Emission Limits

Except during periods of startup, shutdown, low load, and transient events, Turbine #1 shall not exceed the following emissions limits.

| Pollutant | Emission Limit T > 0 °F | Emission Limit 0 °F ≥ T > -20 °F | Emission Limit T ≤ -20 °F | Citation |
|-------------------|----------------------------------|-------------------------------------|------------------------------|----------------------------|
| PM | 1.15 lb/hr | 1.19 lb/hr | | 06-096 C.M.R. ch. 115, BPT |
| PM ₁₀ | 1.15 lb/hr | 1.19 lb/hr | | |
| PM _{2.5} | 1.15 lb/hr | 1.19 lb/hr | | |
| SO ₂ | 0.98 lb/hr | 1.01 lb/hr | | |
| NO _x | 15 ppmdv @ 15% O ₂ | - | | 06-096 C.M.R. ch. 115, BPT |
| | 9.46 lb/hr | 27.38 lb/hr | 78.23 lb/hr | |
| CO | 9.60 lb/hr | 39.69 lb/hr | 59.53 lb/hr | |
| VOC | 1.20 lb/hr | 2.48 lb/hr | 3.73 lb/hr | |

During all operating times, including periods of startup, shutdown, low load, low temperature, and transient events, Turbine #1 shall not exceed the following emissions limits.

| Pollutant | Emission Limit | Citation |
|-----------------|-----------------------------------|---|
| SO ₂ | 0.060 lb/MMBtu | 40 C.F.R. Part 60, Subpart KKKK, § 60.4330(a)(2) |
| NO _x | 150 ppmdv @ 15% O ₂ | 40 C.F.R. Part 60, Subpart KKKK, § 60.4320(a) and Table 1 |

Visible emissions from Turbine #1 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(4)]

7. Gas Releases: Turbine Case Venting

When a turbine sits idle for some time, it is decompressed and vented to atmosphere to prevent damage to equipment. The turbine is also decompressed and vented when

maintenance work is done on the turbine. M&N shall keep records of the date and time of each turbine case venting as well as the amount (scf) of gas vented.

C. Generators #1, #2, and #3

M&N operates three (3) Waukesha VGF24GL 4-stroke, natural gas-fired, lean burn, reciprocating internal combustion engines (Generators #1, #2, and #3). These engines were manufactured and installed in 2008, and each have a maximum rated capacity of 436 kW (585 bhp) and a heat input capacity of 5.02 MMBtu/hr.

Generators #1, #2, and #3 are non-emergency engines that are used to provide operating power to the station. Typically, only one generator is operating at any time. However, due to their size, two generators may need to be operated concurrently during the brief time (less than one hour) it takes to start the compressor turbine. Additionally, when switching generators, the second generator must startup and come online prior to shutting down the operating generator. Therefore, BPT for hours of operation includes an operating limit of 9,636 hours per year (12-month rolling total) for all three generators combined.

The Department determined BPT for NO_x emissions from Generators #1, #2, and #3 is the use of lean-burn technology combustion controls and compliance with the applicable federal emission standards as described below.

1. BPT Findings

The BPT emission limits for the Generators #1, #2, and #3 are based on the following:

- PM/PM₁₀/PM_{2.5} – 0.12 lb/MMBtu from 06-096 C.M.R. ch. 103
- SO₂ – 5.7 lb/MMscf based on AP-42 Table 3.2-2 dated 7/00 and 20,000 grain/MMscf per tariff
- NO_x – 525 lb/MMscf based on manufacturer's guaranteed data
- CO – 459 lb/MMscf based on manufacturer's guaranteed data
- VOC – 197 lb/MMscf based on manufacturer's guaranteed data
- Visible Emissions – 06-096 C.M.R. ch. 115, BPT

The BPT emission limits for Generators #1, #2, and #3 are the following:

| Unit | Pollutant | lb/MMBtu |
|--------------|-----------|----------|
| Generator #1 | PM | 0.12 |
| Generator #2 | PM | 0.12 |
| Generator #3 | PM | 0.12 |

| 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) |
|--------------|---------------|-----------------------------|------------------------------|----------------------------|----------------------------|---------------|----------------|
| Generator #1 | 0.60 | 0.60 | 0.60 | 0.03 | 2.58 | 2.26 | 0.97 |
| Generator #2 | 0.60 | 0.60 | 0.60 | 0.03 | 2.58 | 2.26 | 0.97 |
| Generator #3 | 0.60 | 0.60 | 0.60 | 0.03 | 2.58 | 2.26 | 0.97 |

Visible emissions from Generators #1, #2, and #3 each shall not exceed 10% opacity on a six-minute block average basis.

The Department has determined that the BPT visible emission limit is more stringent than the applicable limit in 06-096 C.M.R. ch. 101. Therefore, the visible emission limit for each generator has been streamlined to the more stringent BPT limit, and only this more stringent limit shall be included in the air emission license.

Combined operation of Generators #1, #2, and #3 shall not exceed 9,636 hours per year based on a 12-month rolling total.

2. Chapter 169

Generators #1, #2, and #3 were installed 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 1.

3. New Source Performance Standards

Standards of Performance for Spark Ignition Internal Combustion Engines, 40 C.F.R. Part 60, Subpart JJJJ is applicable to Generators #1, #2, and #3 since the units were ordered after June 12, 2006, and manufactured after July 1, 2008. [40 C.F.R. § 60.4230] By meeting the requirements of 40 C.F.R. Part 60, Subpart JJJJ, the units also meet the requirements found in the *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 C.F.R. Part 63, Subpart ZZZZ. [40 C.F.R. § 63.6590(c)]

A summary of the currently applicable federal 40 C.F.R. Part 60, Subpart JJJJ requirements is listed below.

a. Emission Standards

Generators #1, #2, and #3 are subject to the following emission standards for non-emergency, spark ignition, natural gas-fired engines between 500 – 1,350 Hp manufactured prior to July 1, 2010, contained in 40 C.F.R. Part 63, Subpart JJJJ, Table 1 pursuant to 40 C.F.R. § 63.4233(e). M&N may choose to comply with the emission standards in units of either g/HP-hr or ppmvd @ 15% O₂.

| Pollutant | g/bhp-hr | ppmvd @ 15% O ₂ |
|-----------------|----------|----------------------------|
| NO _x | 2.0 | 160 |
| CO | 4.0 | 540 |
| VOC | 1.0 | 86 |

b. Control Requirements

The air-to-fuel ratio controller (AFR controller) must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times. [40 C.F.R. § 60.4243(g)]

c. Compliance Demonstration

(1) M&N shall conduct performance tests on each engine to demonstrate compliance with the applicable NO_x, CO, and VOC emission standards in Table 1 every 8,760 hours of operation or 3 years, whichever comes first. [40 C.F.R. § 60.4243(b)(2)(ii)] The most recent performance test was conducted on February 2-3, 2023.

(2) M&N shall provide 30-days' notice of any performance test to both the Department and EPA. [40 C.F.R. § 60.8(d)]

(3) Performance tests shall be conducted in accordance with 40 C.F.R. § 60.4244 including, but not limited to, the following:

- (i) Unless otherwise approved by EPA, each performance test shall be conducted within 10% of 100% peak (or the highest achievable) load. [40 C.F.R. § 60.4244(a)]
- (ii) When calculating emissions of VOC, emissions of formaldehyde shall not be included. [40 C.F.R. § 60.4244(f)]

(4) M&N shall submit a copy of each performance test report to the Department and EPA within 30 days after the test has been completed. [40 C.F.R. § 60.4245(d) and 06-096 C.M.R. ch. 115]

d. Maintenance Plan

M&N shall keep a maintenance plan and records of conducted maintenance. M&N shall, to the extent practicable, maintain and operate each engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 C.F.R. § 60.4243(b)(2)(ii)]

e. Recordkeeping

M&N shall keep records of the following for Generators #1, #2, and #3:

- (1) All notifications submitted to comply with this subpart;
 - (2) All maintenance conducted on each engine;
 - (3) Documentation that each engine meets the emission standards (e.g., copies of performance test reports).
- [40 C.F.R. § 60.4245(a)]

D. Boiler #1

M&N operates Boiler #1 for heat. The boiler is rated at 3.5 MMBtu/hr and fires natural gas. The boiler was installed in 2008 and exhausts through its own stack.

1. BPT Findings

The BPT emission limits for Boiler #1 were based on the following:

- PM/PM₁₀/PM_{2.5} – 0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
- SO₂ – 5.7 lb/MMscf based on AP-42 Table 1.4-2 dated 7/98 and 20,000 grain/MMscf per tariff
- NO_x – 100 lb/MMscf based on AP-42 Table 1.4-1 dated 7/98
- CO – 84 lb/MMscf based on AP-42 Table 1.4-1 dated 7/98
- VOC – 5.5 lb/MMscf based on AP-42 Table 1.4-2 dated 7/98
- Visible Emissions – 06-096 C.M.R. ch. 101

The BPT emission limits for Boiler #1 are the following:

| Unit | Pollutant | lb/MMBtu |
|-----------|-----------|----------|
| Boiler #1 | PM | 0.05 |

| 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) |
|-----------|------------|--------------------------|---------------------------|-------------------------|-------------------------|------------|-------------|
| Boiler #1 | 0.18 | 0.18 | 0.18 | 0.02 | 0.34 | 0.29 | 0.02 |

2. Visible Emissions

Visible emissions from Boiler #1 shall not exceed 10% opacity on a six-minute block average basis.

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

Due to its size, Boiler #1 is not subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989. [40 C.F.R. § 60.40c]

4. National Emission Standards for Hazardous Air Pollutants (NESHAP): 40 C.F.R. Part 63, Subpart JJJJJ

Boiler #1 is not subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63, Subpart JJJJJ. Natural gas-fired units are exempt from the requirements of this regulation. [40 C.F.R. §§ 63.11195(e)]

E. NSPS for Crude Oil and Natural Gas Facilities

M&N is not subject to *Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After August 23, 2011*, 40 C.F.R. Part 60, Subpart OOOO nor *Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015*, 40 C.F.R. Part 60, Subpart OOOOa. The facility is a compressor station constructed prior to the applicability dates of both rules and which has not undergone a modification or reconstruction.

EPA recently promulgated *Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After December 6, 2022*, 40 C.F.R. Part 60, Subpart OOOOb. This rule is not yet in effect, but M&N will also not be subject to it based on the applicability date unless modification or reconstruction occurs.

F. Gas Releases and Fugitive Emissions

Operation of the facility's equipment and plant piping will result in fugitive emissions of natural gas. M&N shall calculate fugitive emissions on a calendar year basis using estimates for similar sized stations and a statistical analysis of available gas quality data.

These fugitive emissions (including VOC and methane) shall be reported to the Department annually as part of the facility's emissions inventory collected per *Emission Statements*, 06-096 C.M.R. ch. 137.

Emergency shutdowns (ESD), ESD testing, and routine maintenance of station piping result in venting natural gas to the atmosphere. These activities are necessary for safety reasons, and no emission limit is imposed intending to restrict these activities. However,

emissions from these activities shall be included in the annual emissions inventory submitted pursuant to 06-096 C.M.R. ch. 137.

M&N shall notify the Department in advance of any scheduled venting event that is expected to result in the release of more than 85,000 scf of natural gas. M&N shall notify the Department within two working days of any unscheduled venting event that results in the release of more than 85,000 scf of natural gas.

M&N shall maintain a log of all gas releases and ESD events that includes the following information:

1. Date of the event;
2. Estimated or actual event start time;
3. Estimated or actual event duration;
4. Event source;
5. Event type (shutdown, maintenance, testing, or malfunction);
6. Description of event;
7. Estimate of the amount of natural gas vented;
8. Estimate of VOC density of the released gas; and
9. Calculation of the tons of VOC emitted based on the VOC content of the gas released.

G. Annual Emission Limits

The following annual facility-wide emission limits are established to ensure and document that M&N is a minor source of criteria pollutants and an area source of HAP.

| Pollutant | Tons/year |
|-------------------|------------------|
| PM | 8.8 |
| PM ₁₀ | 8.8 |
| PM _{2.5} | 8.8 |
| SO ₂ | 4.2 |
| NO _x | 58.0 |
| CO | 71.5 |
| VOC | 34.3 |
| Single HAP | 9.9 |
| Total HAP | 24.9 |

These limits are on a 12-month rolling total basis. Compliance shall be demonstrated by recordkeeping and calculations of actual emissions performed at least once annually. Additional calculation of emissions to demonstrate compliance with these limits on a 12-month rolling total basis shall be performed upon request by the Department.

H. Fugitive Emissions of Particulate Matter

M&N 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.

M&N 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.

I. General Process Emissions

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

J. Performance Test Protocol

For any performance testing required by this license, M&N 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. 115, BPT]

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

K. Emission Statements

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

1. The amount of natural gas fired in each unit on a monthly basis;
2. Calculations of emissions of all regulated pollutants from each emissions unit on a calendar year total basis;
3. Calculations of the VOC and/or HAP emissions from gas releases and fugitive emissions on a calendar year total basis; and
4. Hours of operation for each emission unit on a monthly basis.

Every third year, or as requested by the Department, M&N 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, 2024, for emissions occurring in calendar year 2023. The Department will use these reports to calculate and invoice for the

applicable annual air quality surcharge for the subsequent three billing periods. M&N 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)]

L. 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:

- Operation of Turbine #1 for 8,760 hrs/year, assuming 211 hrs/year each of operation between -20 °F and 0 °F and three hours per year each of operation below -20 °F;
- Operation of Generators #1, #2, and #3 for 9,636 hrs/year total;
- Operation of Boiler #1 for 8,760 hrs/year each; and
- VOC emissions from gas releases and fugitives of 23.9 tpy.

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 |
|-------------------------|------------|------------------|-------------------|-----------------|-----------------|-------------|-------------|
| Turbine #1 | 5.1 | 5.1 | 5.1 | 4.0 | 44.0 | 59.3 | 5.6 |
| Generators #1, #2, #3 | 2.9 | 2.9 | 2.9 | 0.1 | 12.5 | 10.9 | 4.7 |
| Boiler #1 | 0.8 | 0.8 | 0.8 | 0.1 | 1.5 | 1.3 | 0.1 |
| Gas Releases & Fugitive | – | – | – | – | – | – | 23.9 |
| Total TPY | 8.8 | 8.8 | 8.8 | 4.2 | 58.0 | 71.5 | 34.3 |

| Pollutant | Tons/year |
|------------|-----------|
| Single HAP | 9.9 |
| Total HAP | 24.9 |

III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source is determined by the Department on a case-by case basis. In accordance with 06-096 C.M.R. ch. 115, an ambient air quality impact analysis is not required for a minor source if the total licensed annual

emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

| Pollutant | Tons/Year |
|-------------------|------------------|
| PM ₁₀ | 25 |
| PM _{2.5} | 15 |
| SO ₂ | 50 |
| NO _x | 50 |
| CO | 250 |

The total annual licensed emissions for the facility are above at least one of the emission levels contained in the table above due to changes to this table since previous licensing actions. However, the current licensing action makes no changes that would result in increased emissions. Therefore, the Department has determined that an ambient air quality impact analysis is not required at this time.

This determination is based on information provided by the applicant regarding licensed emission units. If the Department determines that any parameter (e.g., stack size, configuration, flow rate, emission rates, nearby structures, etc.) deviates from what was included in the application, the Department may require M&N to submit additional information and may require an ambient air quality impact analysis at that time.

ORDER

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

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

The Department hereby grants Air Emission License A-955-71-F-R subject to the following conditions.

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 CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose

of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S. § 347-C).

- (2) The licensee shall acquire a new or amended air emission license prior to beginning actual construction of a modification, unless specifically provided for in Chapter 115. [06-096 C.M.R. ch. 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 C.M.R. ch. 115]
- (4) 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. 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S. § 353-A. [06-096 C.M.R. ch. 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 C.M.R. ch. 115]
- (7) The licensee shall maintain and operate all emission units and air pollution 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. 115]
- (8) 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 (6) years. The records shall be submitted to the Department upon written request. [06-096 C.M.R. ch. 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 C.M.R. ch. 115]
- (10) 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. 115]

- (11) In accordance with the Department's air emission compliance test protocol and 40 C.F.R. Part 60 or other method approved or required by the Department, the licensee shall:
- A. Perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - 1. Within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 - 2. Pursuant to any other requirement of this license to perform stack testing.
 - B. Install or make provisions to install test ports that meet the criteria of 40 C.F.R. Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - C. Submit a written report to the Department within thirty (30) days from date of test completion.
[06-096 C.M.R. ch. 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. Within thirty (30) days following receipt of the written test report by the Department, or another alternative timeframe approved by the Department, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 C.F.R. Part 60 or other method approved or required by the Department; and
 - B. The days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - C. The licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
[06-096 C.M.R. ch. 115]

- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or license requirement. [06-096 C.M.R. ch. 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 C.M.R. ch. 115]
- (15) Upon written request from 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 a 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. 115]
- (16) The licensee shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S. § 605). [06-096 C.M.R. ch. 115]

SPECIFIC CONDITIONS

(17) **Turbine #1**

- A. Turbine #1 shall only fire pipeline-quality natural gas. [06-096 C.M.R. ch. 115, BPT]
- B. Except during periods of startup, shutdown, low load, and transient events, Turbine #1 shall not exceed the following emission limits:

| Pollutant | Emission Limit T > 0 °F | Emission Limit 0 °F ≥ T > -20 °F | Emission Limit T ≤ -20 °F | Citation |
|-------------------|---------------------------------------|--|--------------------------------------|----------------------------|
| PM | 1.15 lb/hr | 1.19 lb/hr | | 06-096 C.M.R. ch. 115, BPT |
| PM ₁₀ | 1.15 lb/hr | 1.19 lb/hr | | |
| PM _{2.5} | 1.15 lb/hr | 1.19 lb/hr | | |
| SO ₂ | 0.98 lb/hr | 1.01 lb/hr | | |
| NO _x | 15 ppmdv @ 15% O ₂ | - | | 06-096 C.M.R. ch. 115, BPT |
| | 9.46 lb/hr | 27.38 lb/hr | 78.23 lb/hr | |
| CO | 9.60 lb/hr | 39.69 lb/hr | 59.53 lb/hr | |
| VOC | 1.20 lb/hr | 2.48 lb/hr | 3.73 lb/hr | |

- C. During all operating times, including periods of startup, shutdown, low load, low temperature, and transient events, Turbine #1 shall not exceed the following emissions limits:

| Pollutant | Emission Limit | Citation |
|-----------------|--------------------------------|---|
| SO ₂ | 0.060 lb/MMBtu | 40 C.F.R. Part 60, Subpart KKKK, § 60.4330(a)(2) |
| NO _x | 150 ppmdv @ 15% O ₂ | 40 C.F.R. Part 60, Subpart KKKK, § 60.4320(a) and Table 1 |

- D. Visible emissions from Turbine #1 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(4)]
- E. M&N shall keep records of the number of hours during the calendar year that the ambient temperature is at or below 0 °F and at or below -20 °F. Ambient temperature will be measured at the turbine inlet primarily, but for any gaps in M&N's temperature data, it may utilize meteorological data from an appropriate representative location. [06-096 C.M.R. ch. 115, BPT]
- F. M&N shall not operate Turbine #1 in SoLoNO_xTM Disabled mode except for periods of startup, shutdown, low temperature, and low load operation as recommended by the manufacturer. Compliance shall be demonstrated by continuously monitoring the SoLoNO_xTM system and whether it is Enabled/Disabled. [06-096 C.M.R. ch. 115, BPT]
- G. M&N shall continuously monitor the SoLoNO_xTM system on Turbine #1 during all operating times, whether it is Active/Inactive, and use that information to determine the frequency and duration of transient events. M&N shall keep records of the date, time, and duration of all startups and shutdowns. This information shall be used in demonstrating compliance with the facility's annual emission limits. [06-096 C.M.R. ch. 115, BPT]
- H. Turbine #1 is subject to and shall comply with the applicable requirements of 40 C.F.R. Part 60, Subpart A (General Provisions) and Subpart KKKK (Stationary Gas Turbines).
- I. Performance Testing
1. M&N shall conduct performance testing on Turbine #1 for NO_x every two years with no more than 26 calendar months between tests. [40 C.F.R. § 60.4340(a)]
 2. Performance testing for NO_x shall be conducted at any load condition within plus or minus 25% of 100% of peak load. M&N shall conduct three separate test runs

for each performance test. The minimum run time shall be 20 minutes. The ambient temperature shall be greater than 0 °F during the performance test.
[40 C.F.R. § 60.4400(b)]

3. M&N shall conduct a performance test on Turbine #1 for SO₂ on an annual basis with no more than 14 calendar months between tests.
[40 C.F.R. § 60.4415(a)]

M&N may conduct performance tests for SO₂ by collecting a representative sample of natural gas in accordance with ASTM D5287 and analyzing the sample for the total sulfur content of the fuel using ASTM D1072 or other procedures allowed by Subpart KKKK. The fuel analysis may be performed by M&N, a service contractor, the fuel vendor, or other qualified agency.
[40 C.F.R. § 60.4415(a)(1)]

Compliance with the performance test requirement for SO₂ may be achieved by producing a tariff sheet from the fuel vendor that contains documentation the method of sampling and analyzing the natural gas for total sulfur content of the fuel complies with the methods specified by 40 C.F.R. § 60.4415(a)(1).

- J. M&N shall keep documentation of all maintenance and repairs (both planned and unplanned, including parts replacement) performed on Turbine #1 and any associated control equipment. The documentation shall include the date maintenance occurred and what maintenance was performed or which parts replacement were replaced. These records shall be made available to the Department upon request.
[06-096 C.M.R. ch. 115, BPT]
- K. M&N shall maintain a current FERC Gas Tariff establishing gas quality, which documents the total sulfur content is 20 grains of sulfur or less per 100 scf of gas or otherwise comply with the specified methods for demonstrating compliance with the fuel sulfur content requirements of 40 C.F.R. § 60.4365(a).
- L. M&N shall operate and maintain Turbine #1 and its associated air pollution control equipment and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times, including during startup, shutdown, and malfunction. [40 C.F.R. § 60.4333(a)]
- M. M&N may install like-kind manufacturer-supplied replacement components for the turbine that occur either as part of scheduled maintenance of a turbine or in the event of a malfunction or outage and subsequent repair. M&N shall notify the Department in writing in advance of any replacement of turbine components and shall still be subject to and responsible for any applicable New Source Performance Standards provisions with respect to replacement of the turbine or any components.
[06-096 C.M.R. ch. 115, BPT]

N. Parameter Monitors

1. M&N shall monitor and record the following. These are considered Parameter Monitors. [06-096 C.M.R. ch. 115, BPT]

| Parameter | Monitor | Record Monitor Data | Total | Notes |
|---|-----------------------|------------------------|-------------------|-------|
| Natural Gas Fuel Flow Rate to Turbine #1 (standard cubic feet input) | Continuously | Continuously | Monthly | a |
| SoLoNO _x TM Enabled/Disabled Status on Turbine #1 | Continuously (status) | Continuously (minutes) | Monthly (minutes) | b |
| SoLoNO _x TM Active/Inactive Status on Turbine #1 | Continuously (status) | Continuously (minutes) | Monthly (minutes) | b |

Notes:

- a. For this parameter, Continuously means the total fuel flow will be recorded at least once per 15-minute period during turbine operation.
 - b. For this parameter, Continuously means the total minutes for each status will be recorded at least once per 15-minute period during turbine operation.
2. 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 and 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 satisfaction of the Department that the failure of the system to record accurate and reliable data was due to the performance of established quality assurance and quality control procedures or unavoidable malfunctions.
[06-096 C.M.R. ch. 115, BPT]

(18) **Generators #1, #2, and #3**

- A. Each generator shall fire only pipeline quality natural gas. [06-096 C.M.R. ch. 115, BPT]
- B. Combined operation of Generators #1, #2, and #3 shall not exceed 9,636 hours per year based on a 12-month rolling total. [06-096 C.M.R. ch. 115, BPT]

C. Emissions shall not exceed the following:

| Unit | Pollutant | lb/MMBtu | Origin and Authority |
|--------------|-----------|----------|---------------------------------------|
| Generator #1 | PM | 0.12 | 06-096 C.M.R. ch. 103, § (2)(B)(1)(a) |
| Generator #2 | PM | 0.12 | |
| Generator #3 | PM | 0.12 | |

D. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, 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) |
|--------------|------------|--------------------------|---------------------------|-------------------------|-------------------------|------------|-------------|
| Generator #1 | 0.60 | 0.60 | 0.60 | 0.03 | 2.58 | 2.26 | 0.97 |
| Generator #2 | 0.60 | 0.60 | 0.60 | 0.03 | 2.58 | 2.26 | 0.97 |
| Generator #3 | 0.60 | 0.60 | 0.60 | 0.03 | 2.58 | 2.26 | 0.97 |

E. Visible emissions from Generators #1, #2, and #3 each shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

F. Generators #1, #2, and #3 shall each meet the applicable requirements of 40 C.F.R. Part 60, Subpart JJJJ, including the following:
[incorporated under 06-096 C.M.R. ch. 115, BPT]

1. Emission Standards

Generators #1, #2, and #3 shall not exceed the following emission standards for non-emergency, spark ignition, natural gas-fired engines between 500 – 1,350 Hp manufactured prior to July 1, 2010, contained in 40 C.F.R. Part 63, Subpart JJJJ, Table 1 pursuant to 40 C.F.R. § 63.4233(e). M&N may choose to comply with the emission standards in units of either g/HP-hr or ppmvd @ 15% O₂.

| Pollutant | g/bhp-hr | ppmvd @ 15% O ₂ |
|-----------------|----------|----------------------------|
| NO _x | 2.0 | 160 |
| CO | 4.0 | 540 |
| VOC | 1.0 | 86 |

2. Control Requirements

The air-to-fuel ratio controller (AFR controller) must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times. [40 C.F.R. § 60.4243(g)]

3. Compliance Demonstration

- a. M&N shall conduct performance tests on each engine to demonstrate compliance with the applicable NO_x, CO, and VOC emission standards in Table 1 every 8,760 hours of operation or 3 years, whichever comes first. [40 C.F.R. § 60.4243(b)(2)(ii)]
- b. M&N shall provide 30-days' notice of any performance test to both the Department and EPA. [40 C.F.R. § 60.8(d)]
- c. Performance tests shall be conducted in accordance with 40 C.F.R. § 60.4244 including, but not limited to, the following:
 - (1) Unless otherwise approved by EPA, each performance test shall be conducted within 10% of 100% peak (or the highest achievable) load. [40 C.F.R. § 60.4244(a)]
 - (2) When calculating emissions of VOC, emissions of formaldehyde shall not be included. [40 C.F.R. § 60.4244(f)]
- d. M&N shall submit a copy of each performance test report to the Department and EPA within 30 days after the test has been completed. [40 C.F.R. § 60.4245(d) and 06-096 C.M.R. ch. 115]

4. Maintenance Plan

M&N shall keep a maintenance plan and records of conducted maintenance. M&N shall, to the extent practicable, maintain and operate each engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 C.F.R. § 60.4243(b)(2)(ii)]

5. Recordkeeping

M&N shall keep records of the following for Generators #1, #2, and #3:

- a. All notifications submitted to comply with this subpart;
 - b. All maintenance conducted on each engine;
 - c. Documentation that each engine meets the emission standards (e.g., copies of performance test reports or supplier certification).
- [40 C.F.R. § 60.4245(a)]

(19) **Boiler #1**

- A. M&N shall fire only natural gas in Boiler #1. [06-096 C.M.R. ch. 115, BPT]
- B. Emissions shall not exceed the following:

| Emission Unit | Pollutant | lb/MMBtu | Origin and Authority |
|---------------|-----------|----------|----------------------------|
| Boiler #1 | PM | 0.05 | 06-096 C.M.R. ch. 115, BPT |

- C. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, 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) |
|-----------|------------|--------------------------|---------------------------|-------------------------|-------------------------|------------|-------------|
| Boiler #1 | 0.18 | 0.18 | 0.18 | 0.02 | 0.34 | 0.29 | 0.02 |

- D. Visible emissions from Boiler #1 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(3)]

(20) **Gas Releases and Fugitive Emissions**

- A. M&N shall maintain a log of all gas releases and ESD events that includes the following information:
 - 1. Date of the event;
 - 2. Estimated or actual event start time;
 - 3. Estimated or actual event duration;
 - 4. Event source;
 - 5. Event type (shutdown, maintenance, testing, or malfunction);
 - 6. Description of event;
 - 7. Estimate of the amount of natural gas vented;
 - 8. Estimate of VOC density of the released gas; and
 - 9. Calculation of the tons of VOC emitted based on the VOC content of the gas released.[06-096 CMR 115, BPT]
- B. M&N shall notify the Department in advance of any scheduled venting event that is expected to result in the release of more than 85,000 scf of natural gas. M&N shall notify the Department within two working days of any unscheduled venting event that results in the release of more than 85,000 scf of natural gas. [06-096 CMR 115, BPT]

(21) **Annual Emission Limits**

- A. Total emissions from all licensed sources at the facility shall not exceed the following on a 12-month rolling total basis. [06-096 C.M.R. ch. 115, BPT]

| Pollutant | Tons/year |
|-------------------|-----------|
| PM | 8.8 |
| PM ₁₀ | 8.8 |
| PM _{2.5} | 8.8 |
| SO ₂ | 4.2 |
| NO _x | 58.0 |
| CO | 71.5 |
| VOC | 34.3 |
| Single HAP | 9.9 |
| Total HAP | 24.9 |

- B. As part of documenting compliance with the annual emission limits listed above, M&N shall include turbine emissions from startup, shutdown, and transient events and calculate turbine emissions based on the following:

| Mode | Calculate Emissions Using Emission Factors Based On... |
|------------------|--|
| Startup | The emissions data supplied by the turbine manufacturer |
| Shutdown | The emissions data supplied by the turbine manufacturer |
| Normal Operation | Licensed emission limits for temperatures above 0 °F |
| Low Temperature | Licensed emission limits for appropriate temperature range |
| Transient Event | Licensed emission limits for temperatures less than or equal to -20 °F |

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

- C. M&N shall keep monthly records sufficient to document the facility's emissions on a 12-month rolling total basis and shall make those records available to the Department upon request. [06-096 C.M.R. ch. 115, BPT]

(22) **Fugitive Emissions**

- A. M&N 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. M&N 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)]

(23) **General Process Sources**

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

(24) **Performance Test Protocol**

For any performance testing required by this license, M&N 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. 115, BPT]

(25) **Annual Emission Statements**

A. In accordance with *Emission Statements*, 06-096 C.M.R. ch. 137, M&N 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. M&N shall keep the following records in order to comply with 06-096 C.M.R. ch. 137:

1. The amount of natural gas fired in each unit on a monthly basis;
 2. Calculations of emissions of all regulated pollutants from each emissions unit on a calendar year total basis;
 3. Calculations of the VOC and/or HAP emissions from gas releases and fugitive emissions on a calendar year total basis; and
 4. Hours of operation for each emission unit on a monthly basis.
- [06-096 C.M.R. ch. 137]

C. Every third year, or as requested by the Department, M&N 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, 2024, for emissions occurring in calendar year 2023. M&N 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)]

(26) If the Department determines that any parameter value pertaining to construction and operation of the emissions units, including but not limited to stack size, configuration, flow rate, emission rates, nearby structures, etc., deviates from what was submitted in the

Maritimes & Northeast Pipeline, L.L.C.
Hancock County
Township T35 MD, Maine
A-955-71-F-R

30

Departmental
Findings of Fact and Order
Air Emission License
Renewal

application or ambient air quality impact analysis for this air emission license, M&N may be required to submit additional information. Upon written request from the Department, M&N shall provide information necessary to demonstrate AAQS will not be exceeded, potentially including submission of an ambient air quality impact analysis or an application to amend this air emission license to resolve any deficiencies and ensure compliance with AAQS. Submission of this information is due within 60 days of the Department's written request unless otherwise stated in the Department's letter.

[06-096 C.M.R. ch. 115, § 2(O)]

DONE AND DATED IN AUGUSTA, MAINE THIS 29th DAY OF MARCH, 2024.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:  for
MELANIE LOYZIM, COMMISSIONER

The term of this license shall be ten (10) years from the signature date above.

[Note: If a renewal application, determined as complete by the Department, is submitted prior to expiration of this license, then pursuant to Title 5 M.R.S. § 10002, all terms and conditions of the license shall remain in effect until the Department takes final action on the license renewal application.]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 3/7/2023

Date of application acceptance: 3/7/2023

Date filed with the Board of Environmental Protection:

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

FILED
MAR 29, 2024
State of Maine
Board of Environmental Protection