



DEPARTMENT ORDER

**Michael Merrill**  
**Somerset County**  
**Embden, Maine**  
**A-1123-71-A-N**

**Departmental**  
**Findings of Fact and Order**  
**Initial Air Emission License**  
**After-the-Fact**

**FINDINGS OF FACT**

After review of the air emission license 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

Michael Merrill (Merrill) has applied for an Air Emission License for the operation of their portable crushed stone and gravel facility located on Kennebec River Road in Embden, Maine.

The main office is located at 208 Eaton Mountain Road, Skowhegan, Maine.

B. Emission Equipment

The following equipment is addressed in this Air Emission License:

**Rock Crusher**

<u>Designation</u>	<u>Powered</u>	<u>Process Rate (tons/hour)</u>	<u>Date of Manufacture</u>
Crusher #1	Generator #1	120	1961

**Generator Unit**

<u>Unit ID</u>	<u>Max. Capacity (MMBtu/hr)</u>	<u>Max. Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Date of Manuf.</u>
Generator #1	2.84	20.74	Distillate fuel, 0.0015%	1990

C. Definitions

*Distillate Fuel.* For the purposes of this license, *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.

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.

Merrill is classified as an existing source that is applying for its first air emission license, after-the-fact. A source is considered a major or minor source based on whether or not total licensed annual emissions exceed the “significant Emission” levels as defined in the Department’s *Definitions Regulation*, 06-096 Code of Maine Rules (C.M.R.) ch. 100 (as amended).

<u>Pollutant</u>	<u>Total Licensed Annual Emissions (TPY)</u>	<u>Significant Emission Levels</u>
PM	0.5	100
PM <sub>10</sub>	0.5	100
SO <sub>2</sub>	0.1	100
NO <sub>x</sub>	19.6	100
CO	4.2	100
VOC	1.6	50
CO <sub>2</sub> e	< 100,000	100,000

The Department has determined the facility is a minor source, and the application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 C.M.R. ch. 115 (as amended).

The facility is incapable of exceeding the major source thresholds for criteria pollutants and is considered a natural minor. The facility is incapable of exceeding the major source thresholds for hazardous air pollutants (HAP) and is considered an area source of HAP.

## II. BEST PRACTICAL TREATMENT

### 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 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. Rock Crusher

Crusher #1 is a portable unit which was manufactured in 1961 with a rated capacity of 120 tons/hr.

#### 1. BACT/BPT Findings

The regulated pollutant from the Crusher #1 is particulate matter emissions. To meet the requirements of BACT for control of particulate matter emissions from Crusher #1, Merrill shall maintain water sprays or other equally effective control equipment on the rock crushers and operate as need to control visible emissions. Visible emissions from Crusher #1 shall be limited to no greater than 10% opacity on a six-minute block average basis.

Merrill shall maintain records detailing and quantifying the hours of operation on a daily basis for Crusher #1. The operation records shall be kept on-site at the rock crushing location.

Additionally, Merrill shall maintain records detailing the maintenance on particulate matter control equipment (including spray nozzles). Merrill shall perform monthly inspections of the control equipment. If water sprays are used, the monthly inspection shall consist of ensuring water is flowing to the correct locations and, if it is not, Merrill shall initiate corrective action within 24 hours. Records of the date of each inspection and any corrective action required shall be included in the maintenance records. The maintenance records shall be kept on-site at the rock crushing location.

2. New Source Performance Standards

Based on the size of the unit, Crusher #1 is not subject to EPA New Source Performance Standards (NSPS) *Standards of Performance for Nonmetallic Mineral Processing Plants*, 40 C.F.R. Part 60, Subpart OOO for nonmetallic mineral processing plants manufactured after August 31, 1983, with capacities greater than 150 tons/hr for portable plants and greater than 25 tons/hr for non-portable plants. [40 C.F.R. § 60.670(c)]

To ensure classification as a portable plant, Crusher #1 shall not be attached or clamped via cable, chain, turnbuckle, bolt, or other means (except electrical connections) to any anchor, slab, or structure (including bedrock) that must be moved prior to transportation.

C. Generator #1

Generator #1 is a portable engine used to power Crusher #1. Generator #1 has a maximum capacity of 2.84 MMBtu/hr (425 brake horsepower) and fires distillate fuel at a rate of 20.74 gallons per hour. Generator #1 was manufactured in 1990 and is a CAT Engine Model 3406. The fuel fired in Generator #1 shall be limited to 65,000 gallons/year on a calendar year total basis with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight).

1. BACT/BPT Findings

The BACT/BPT emission limits for Generator #1 were based on the following:

- PM, PM<sub>10</sub> - 0.12 lb/MMBtu from 06-096 C.M.R. ch. 115, BACT/BPT
- SO<sub>2</sub> - combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
- NO<sub>x</sub> - 4.41 lb/MMBtu from AP-42, Table 3.3-1, dated 10/96
- CO - 0.95 lb/MMBtu from AP-42, Table 3.3-1, dated 10/96
- VOC - 0.36 lb/MMBtu from AP-42, Table 3.3-1, dated 10/96
- Visible Emissions - 06-096 C.M.R. ch. 115, BACT/BPT

The BACT/BPT emission limits for Generator #1 are the following:

<u>Unit</u>	<u>PM</u> <u>(lb/hr)</u>	<u>PM<sub>10</sub></u> <u>(lb/hr)</u>	<u>SO<sub>2</sub></u> <u>(lb/hr)</u>	<u>NO<sub>x</sub></u> <u>(lb/hr)</u>	<u>CO</u> <u>(lb/hr)</u>	<u>VOC</u> <u>(lb/hr)</u>
Generator #1	0.34	0.34	0.01	12.52	2.70	1.02

Visible emissions from Generator #1 shall not exceed 20% opacity on a six-minute block average basis.

2. New Source Performance Standards

Generator #1 was manufactured prior to April 1, 2006. Therefore, Generator #1 is not subject to *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, 40 C.F.R. Part 60, Subpart IIII. [40 C.F.R. § 60.4200]

3. National Emission Standards for Hazardous Air Pollutants

Generator #1 is considered a non-road engine, as opposed to a stationary engine, since Generator #1 is portable and will be moved to various sites with the rock crusher. Therefore, Generator #1 is not subject to *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 C.F.R. Part 63, Subpart ZZZZ. The definition in 40 C.F.R. § 1068.30 states that a non-road engine is an internal combustion engine that meets certain criteria, including: "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." 40 C.F.R. § 1068.30 further states that an engine is not a non-road engine if it remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. An engine located at a seasonal source (a stationary source that remains in a single location on a permanent basis (i.e., at least two years) and that operates at that single location approximately three months (or more) each year) is an engine that remains at a seasonal source during the full annual operating period of the seasonal source. [40 C.F.R. § 63.6585]

D. Stock Piles and Roadways

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity, except for no more than six minutes in any one-hour period, during which time visible emissions shall not exceed 30% opacity. Compliance shall be determined on a six-minute block average basis.

E. General Process Emissions

Visible emissions from any other general process (non-NSPS crusher conveyor belts, bucket elevators, bagging operations, truck loading operations, portable screens, etc.) shall not exceed 20% opacity on a six-minute block average basis.

F. Annual Emissions

1. Total Annual Emissions

Merrill shall be restricted to the following annual emissions, based on a calendar year total. The tons per year limits were calculated based on a limit of 65,000 gallons/year of distillate fuel for Generator #1:

**Total Licensed Annual Emissions for the Facility**  
**Tons/year**  
(used to calculate the annual license fee)

	<u>PM</u>	<u>PM<sub>10</sub></u>	<u>SO<sub>2</sub></u>	<u>NO<sub>x</sub></u>	<u>CO</u>	<u>VOC</u>
Generator #1	0.5	0.5	0.1	19.6	4.2	1.6
<b>Total TPY</b>	<b>0.5</b>	<b>0.5</b>	<b>0.1</b>	<b>19.6</b>	<b>4.2</b>	<b>1.6</b>

2. Greenhouse Gases

Greenhouse gases are considered regulated pollutants as of January 2, 2011, through 'Tailoring' revisions made to EPA's *Approval and Promulgation of Implementation Plans*, 40 C.F.R. Part 52, Subpart A, § 52.21, *Prevention of Significant Deterioration of Air Quality* rule. Greenhouse gases, as defined in 06-096 C.M.R. ch. 100, are the aggregate group of the following gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. For licensing purposes, greenhouse gases (GHG) are calculated and reported as carbon dioxide equivalents (CO<sub>2</sub>e).

The quantity of CO<sub>2</sub>e emissions from this facility is less than 100,000 tons per year, based on the following:

- the facility's fuel use limit;
- worst case emission factors from the following sources: U.S. EPA's AP-42, the Intergovernmental Panel on Climate Change (IPCC), and *Mandatory Greenhouse Gas Reporting*, 40 C.F.R. Part 98; and
- global warming potentials contained in 40 C.F.R. Part 98.

No additional licensing actions to address GHG emissions are required at this time.

**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:

<b>Pollutant</b>	<b>Tons/Year</b>
PM <sub>10</sub>	25
SO <sub>2</sub>	50
NO <sub>x</sub>	50
CO	250

The total licensed annual emissions for the facility are below the emission levels contained in the table above and there are no extenuating circumstances; therefore, an ambient air quality impact analysis is not required as part of this license.

### 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,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-1123-71-A-N, 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 commencing construction of a modification, unless specifically provided for in 06-096 C.M.R. ch. 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 such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 C.F.R. Part 60 or other method approved or required by the Department; and
  - B. The days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
  - C. The licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a

demonstration of compliance under normal and representative process and operating conditions.  
[06-096 C.M.R. ch. 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 Part 70 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]

#### **SPECIFIC CONDITIONS**

(16) **Rock Crusher**

- A. Merrill shall install and maintain water spray nozzles or other equally effective controls for particulate control on Crusher #1 and operate as necessary to limit visible emissions to no greater than 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT/BPT and 06-096 C.M.R. ch. 101]
- B. Merrill shall maintain records detailing and quantifying the hours of operation on a daily basis for Crusher #1. The operation records shall be kept on-site at the rock crushing location. [06-096 C.M.R. ch. 115, BACT/BPT]
- C. Merrill shall maintain records detailing the maintenance on particulate matter control equipment (including spray nozzles). Merrill shall perform monthly inspections of the control equipment. If water sprays are used, the monthly inspection shall consist of ensuring water is flowing to the correct locations and, if it is not, Merrill shall initiate corrective action within 24 hours.

Records of the date of each inspection and any corrective action required shall be included in the maintenance records. The maintenance records shall be kept on-site at the rock crushing location. [06-096 C.M.R. ch. 115, BACT/BPT]

D. Crusher #1 shall not be attached or clamped via cable, chain, turnbuckle, bolt, or other means (except electrical connections) to any anchor, slab, or structure (including bedrock) that must be removed prior to transportation. [06-096 C.M.R. ch. 115, BACT/BPT]

(17) **Generator #1**

A. Fuel Use

1. Generator #1 is licensed to fire distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight). [06-096 C.M.R. ch. 115, BACT/BPT]
2. Total fuel use for Generator #1 shall not exceed 65,000 gal/yr of distillate fuel. Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and sulfur content of fuel delivered. Records of annual fuel use shall be kept on a monthly and calendar year total basis. [06-096 C.M.R. ch. 115, BACT/BPT]

B. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BACT/BPT]:

<b>Unit</b>	<b>PM (lb/hr)</b>	<b>PM<sub>10</sub> (lb/hr)</b>	<b>SO<sub>2</sub> (lb/hr)</b>	<b>NO<sub>x</sub> (lb/hr)</b>	<b>CO (lb/hr)</b>	<b>VOC (lb/hr)</b>
Generator #1	0.34	0.34	0.01	12.52	2.70	1.02

C. Visible emissions from Generator #1 shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT/BPT]

(18) **Stockpiles and Roadways**

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity, except for no more than six minutes in any one-hour period, during which time visible emissions shall not exceed 30% opacity. Compliance shall be determined on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

(19) **General Process Sources**

Visible emissions from any other general process (non-NSPS crusher conveyor belts, bucket elevators, bagging operations, truck loading operations, portable screens, etc.) shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

(20) **Equipment Relocation** [06-096 C.M.R. ch. 115, BPT]

A. Merrill shall notify the Bureau of Air Quality, by a written notification, prior to relocation of any equipment carried on this license. It is preferred for notice of relocation to be submitted through the Department's on-line e-notice at: [www.maine.gov/dep/air/compliance/forms/relocation](http://www.maine.gov/dep/air/compliance/forms/relocation)

Written notice may also be sent by fax (207-287-7641) or mail. Notification sent by mail shall be sent to the address below:

Attn: Relocation Notice  
Maine DEP  
Bureau of Air Quality  
17 State House Station  
Augusta, ME 04333-0017

The notification shall include the address of the equipment's new location, an identification of the equipment, and the license number pertaining to the relocated equipment.

B. Written notification shall also be made to the municipality where the equipment will be relocated, except in the case of an unorganized territory where notification shall be made to the respective county commissioners.

(21) Merrill shall keep a copy of this Order on site, and have the operator(s) be familiar with the terms of this Order. [06-096 C.M.R. ch. 115, BPT]

Michael Merrill  
Somerset County  
Embden, Maine  
A-1123-71-A-N

13

Departmental  
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- (22) Merrill 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].

DONE AND DATED IN AUGUSTA, MAINE THIS 20 DAY OF March, 2017.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: *Paul Mercer*  
PAUL MERCER, 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: 11/9/2016

Date of application acceptance: 12/5/2016

Date filed with the Board of Environmental Protection:

This Order prepared by Jonathan E. Rice, Bureau of Air Quality.

