STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
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DEPARTMENT ORDER

Pike Industries, Inc. **Oxford County** **North Waterford, Maine** **A-312-71-O-A**	**Departmental** **Findings of Fact and Order** **Air Emission License** **Amendment #1**

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 (Department) finds the following facts:

I. REGISTRATION

A. Introduction

Pike Industries, Inc. (Pike) was issued Air Emission License A-312-71-N-R/A on October 4, 2016, for the operation of emission sources associated with their stationary hot mix asphalt plant facility.

Pike has requested an amendment to their license in order to install a 500 kW portable generator to power rock crushers and other equipment as needed.

The equipment addressed in this license amendment is located at 368 Bisbeetown Road, North Waterford Maine.

B. Emission Equipment

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

Stationary Engines

Equipment	Max. Input Capacity (MMBtu/hr)	Rated Output Capacity (HP)	Fuel Type, % sulfur	Firing Rate (gal/hr)	Date of Manuf.	Date of Install.
Generator 776	4.4	685	Distillate Fuel, 0.0015%	32.0	1986	2018

C. 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.

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.

The modification of a minor source is considered a major or minor modification based on whether or not expected emission increases exceed the "Significant Emission" levels as defined in the Department's *Definitions Regulation*, 06-096 Code of Maine Rules (C.M.R.) ch. 100. The emission increases are determined by subtracting the current licensed annual emissions preceding the modification from the maximum future licensed annual emissions, as follows:

Pollutant	Current License (TPY)	Future License (TPY)	Net Change (TPY)	Significant Emission Levels
PM	5.4	5.6	0.2	100
PM_{10}	5.4	5.6	0.2	100
SO_2	17.5	17.5	0.0	100
NO_x	18.9	24.4	5.5	100
CO	60.2	61.7	1.5	100
VOC	5.4	5.6	0.2	50
CO_2e	--	--	--	100,000

This modification is determined to be a minor modification and has been processed as such.

E. Facility Classification

The facility is licensed as follows:

- As a natural minor source of air emissions, because facility emissions cannot exceed major source thresholds for criteria pollutants; 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 new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in *Definitions Regulation*, 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. Generator 776

Pike is adding a portable generator at the North Waterford site to potentially power equipment as needed. Generator 776 has a rated electrical output of 500 kW and fires distillate fuel at a maximum rate of 32 gallons per hour. Generator 776 shall have an annual fuel limit of 25,000 gallons per year, and the fuel shall have a maximum sulfur content of 0.0015% by weight.

Generator 776 was manufactured in 1986 and is considered a non-road engine, as opposed to a stationary engine, since it is portable and will be moved to various sites with the rock crushers and other equipment. Based on its age and classification as a non-road engine, Generator 776 is not subject to either 40 C.F.R. Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* or 40 C.F.R. Part 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.*

The definition in 40 C.F.R. Part 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. Part 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 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 a full annual operating period of the seasonal source.

BACT Findings

The BACT emission limits for the generator is based on the following:

PM/PM_{10}	- 0.12 lb/MMBtu from 06-096 C.M.R. ch. 103
SO_2	- combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO_x	- 3.2 lb/MMBtu from AP-42 dated 10/96
CO	- 0.85 lb/MMBtu from AP-42 dated 10/96
VOC	- 0.09 lb/MMBtu from AP-42 dated 10/96
Visible Emissions	- 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for the generator are the following:

Unit	Pollutant	lb/MMBtu
Generator 776	PM	0.12

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator 776 4.4 MMBtu/hr Distillate fuel	0.53	0.53	0.01	14.08	3.74	0.40

Visible emissions from Generator 776 shall not exceed 20% opacity on a six-minute block average basis except for periods of startup, during which time Pike may elect to comply with the following work practice standards in lieu of this opacity limit.

a. Pike shall maintain a log (written or electronic) of the date, time, and duration of all generator startups.

b. The generator shall be operated in accordance with the manufacturer's emission-related operating instructions.

c. Pike shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations shall apply.

d. The generator, including any associated air pollution control equipment, shall be operated at all times in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the unit.

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

C. Annual Emissions

1. Total Annual Emissions

Pike shall be restricted to the following annual emissions, based on a 12-month rolling total. The tons per year limits were calculated based on 25,000 gal/yr of distillate fuel being fired in the newly licensed Generator 776, and the previously licensed limit of 300,000 tons per year of asphalt production from their existing stationary hot mix asphalt plant P907.

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

	PM	PM_{10}	SO_2	NO_x	CO	VOC
Asphalt Batch Plant P907	4.9	4.9	13.2	18.0	60.0	5.4
Hot Oil Heater P907-1	0.5	0.5	4.3	0.9	0.2	Neg.
Generator 776	0.2	0.2	Neg.	5.5	1.5	0.2
Total TPY	**5.6**	**5.6**	**17.5**	**24.4**	**61.7**	**5.6**

Pollutant	Tons/year
Single HAP	9.9
Total HAP	24.9

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_2e).

The quantity of CO_2e emissions from this facility is less than 100,000 tons per year, based on the following:

- the facility's fuel use limit;
- the facility's annual production 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:

Pollutant	Tons/Year
PM_{10}	25
SO_2	50
NO_x	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, and
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License Amendment A-312-71-O-A subject to the conditions found in Air Emission License A-312-71-N-R/A and the following conditions.

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 is a new Specific Condition for Air Emission License A-312-71-N-R/A (dated October 4, 2016):

(23) **Generator 776**

A. Fuel Use

1. The fuel sulfur content for Generator 776 shall be limited to 0.0015% sulfur by weight. [06-096 C.M.R. ch. 115, BACT]

2. Generator 776 shall be limited to firing a maximum of 25,000 gallons of distillate fuel on a 12-month rolling total basis. Compliance shall be demonstrated by Pike by maintaining fuel records from the supplier that document the quantity and type of fuel delivered, and the sulfur content of the fuel by weight. [06-096 C.M.R. ch. 115, BACT]

B. Emission Limits

1. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Generator 776	PM	0.12	06-096 C.M.R. ch. 115, BACT

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

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator 776 4.4 MMBtu/hr Distillate Fuel	0.53	0.53	0.01	14.08	3.74	0.40

3. Visible Emissions

Visible emissions from Generator 776 shall not exceed 20% opacity on a six-minute block average basis except for periods of startup, during which time Pike may elect to comply with the following work practice standards in lieu of this opacity limit. [06-096 C.M.R. ch. 115, BACT]

a. Pike shall maintain a log (written or electronic) of the date, time, and duration of all generator startups.

b. The generator shall be operated in accordance with the manufacturer's emission-related operating instructions.

c. Pike shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations shall apply.

d. The generator, including any associated air pollution control equipment, shall be operated at all times in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the unit.

DONE AND DATED IN AUGUSTA, MAINE THIS 19 DAY OF February, 2019.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Cone for
GERALD D. REID, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-312-71-N-R/A.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: October 19, 2018
Date of application acceptance: October 22, 2018

Date filed with the Board of Environmental Protection:

Filed
FEB 19 2019
State of Maine
Board of Environmental Protection

This Order prepared by Patric J. Sherman, Bureau of Air Quality.