



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE
GOVERNOR

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COMMISSIONER

**Pike Industries, Inc.
Knox County
Washington, Maine
A-239-71-O-M (SM)**

**Departmental
Findings of Fact and Order
Air Emission License
Amendment #2**

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 Annotated (M.R.S.A.), §344 and §590, the Maine Department of Environmental Protection (the Department) finds the following facts:

I. REGISTRATION

A. Introduction

Pike Industries, Inc. (Pike) was issued Air Emission License A-239-71-M-T/R on October 24, 2014, for the operation of emission sources associated with their hot mix asphalt plant located at 73 Jefferson Road, Washington, Maine. The license was subsequently amended on October 13, 2015 (A-239-71-N-A).

Pike has requested a minor revision to their license in order to add liquefied petroleum gas (LPG) as a licensed fuel for Hot Oil Heater #1.

The main office is located at 95 Warren Avenue, Westbrook, Maine.

B. Emission Equipment

The following equipment is addressed in this Air Emission License Amendment:

Heating Equipment

Equipment	Max. Capacity (MMBtu/hr)	Fuel Type, % sulfur	Maximum Firing Rate	Date of Manuf.
Hot Oil Heater #1 (Heatec hot oil heater)	2.2	distillate fuel, 0.5%	17.8 gal/hr	1999
		LPG, negl.	24.3 gal/hr	

C. Application Classification

This amendment will increase emissions by less than 4 ton/year for each single pollutant and less than 8 ton/year for all pollutants combined. Therefore, this modification is determined to be a minor revision and has been processed as such.

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 Code of Maine Rules (CMR) 100 (as amended). 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 CMR 100. BACT is a top-down approach to selecting air emission controls considering economic, environmental, and energy impacts.

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. Hot Oil Heater #1

Hot Oil Heater #1 has a maximum capacity of 2.2 MMBtu/hr, and is currently licensed to fire distillate fuel with maximum sulfur content of 0.5% by weight. Hot Oil Heater #1 was manufactured in 1999 and installed on site in 2015. Pike has requested a minor revision to their license in order to add LPG as a licensed fuel for Hot Oil Heater #1.

1. BACT/BPT Findings

The BACT/BPT emission limits for Hot Oil Heater #1 when firing LPG were based on the following:

- PM, PM₁₀ – 0.05 lb/MMBtu based on 06-096 CMR 115, BACT/BPT
- SO₂ – 0.018 lb/1000 gal based on AP-42, Table 1.5-1, dated 7/08
- NO_x – 13 lb/1000 gal based on AP-42, Table 1.3-1, dated 7/08
- CO – 7.5 lb/1000 gal based on AP-42, Table 1.3-1, dated 7/08
- VOC – 1.0 lb/1000 gal based on AP-42, Table 1.3-3, dated 7/08
- Opacity – 06-096 CMR 115, BACT/BPT

The BACT/BPT emission limits for Hot Oil Heater #1 when firing LPG are the following:

<u>Unit</u>	<u>PM (lb/hr)</u>	<u>PM₁₀ (lb/hr)</u>	<u>SO₂ (lb/hr)</u>	<u>NO_x (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>
Hot Oil Heater #1 LPG	0.11	0.11	0.01	0.32	0.18	0.02

Visible emissions from Hot Oil Heater #1 when firing LPG shall not exceed 10% opacity on a six-minute block average basis.

Hot Oil Heater #1 is licensed to fire distillate fuel which, by definition, has a sulfur content of 0.5% or less by weight. Per 38 M.R.S.A. §603-A(2)(A)(3), as of July 1, 2018, no person shall import, distribute, or offer for sale any distillate fuel with a sulfur content greater than 0.0015% by weight (15 ppm). Therefore, beginning July 1, 2018, the distillate fuel purchased or otherwise obtained for use in Hot Oil Heater #1 shall not exceed 0.0015% by weight (15 ppm).

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 a maximum throughput of 300,000 tons per year of asphalt and the operation of Hot Oil Heater #1 for 8,760 hours per year and the worst-case emissions for each pollutant considering both licensed fuels:

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

	PM	PM₁₀	SO₂	NO_x	CO	VOC
Asphalt Batch Plant (P818)	7.5	7.5	13.2	18.0	60.0	1.3
Hot Oil Heater #1	1.2	1.2	4.9	3.9	0.8	0.1
Total TPY	8.7	8.7	18.1	21.9	60.8	1.4

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 CFR Part 52, Subpart A, §52.21, *Prevention of Significant Deterioration of Air Quality* rule. Greenhouse gases, as defined in 06-096 CMR 100 (as amended), 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 (CO₂e).

The quantity of CO₂e emissions from this facility is less than 100,000 tons per year, based on the following:

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

<u>Pollutant</u>	<u>Tons/Year</u>
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,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License Amendment A-239-71-O-M, subject to the conditions found in Air Emission License A-239-71-M-T/R, in amendment A-239-71-N-A, and 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.

SPECIFIC CONDITIONS

The following condition shall replace condition (22) of air emission license amendment A-239-71-N-A:

(22) Hot Oil Heater #1

A. Fuel

1. Hot Oil Heater #1 is licensed to fire distillate fuel and LPG. [06-096 CMR 115, BACT/BPT]
2. Prior to July 1, 2018, the distillate fuel fired in Hot Oil Heater #1 shall have a maximum sulfur content not to exceed 0.5% by weight. [06-096 CMR 115, BACT/BPT]

3. Beginning July 1, 2018, the facility shall not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm) for use in Hot Oil Heater #1. [06-096 CMR 115, BACT/BPT]
4. Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and the percent sulfur of the fuel delivered (if applicable). Records of annual fuel use shall be kept on a monthly and 12-month rolling total basis. [06-096 CMR 115, BACT/BPT]

B. Emissions shall not exceed the following [06-096 CMR 115, BACT/BPT]:

<u>Unit</u>	<u>PM (lb/hr)</u>	<u>PM₁₀ (lb/hr)</u>	<u>SO₂ (lb/hr)</u>	<u>NO_x (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>
Hot Oil Heater #1 Distillate fuel	0.26	0.26	1.10	0.33	0.09	0.01
Hot Oil Heater #1 LPG	0.11	0.11	0.01	0.32	0.18	0.02

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C. Visible emissions

1. Visible emissions from Hot Oil Heater #1 when firing distillate fuel shall not exceed 20% opacity on a six-minute block average basis, except for no more than one six-minute block average in a continuous three-hour period. [06-096 CMR 101]
2. Visible emissions from Hot Oil Heater #1 when firing LPG shall not exceed 10% opacity on a six-minute block average basis. [06-096 CMR 115, BACT/BPT]

DONE AND DATED IN AUGUSTA, MAINE THIS 9 DAY OF June, 2016.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Core for
PAUL MERCER, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-239-71-M-T/R.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 4/14/2016

Date of application acceptance: 4/21/2016

Date filed with the Board of Environmental Protection:

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

