



DEPARTMENT ORDER

**Pike Industries, Inc.
Piscataquis County
Dover-Foxcroft, Maine
A-75-71-X-M (SM)**

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

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-75-71-W-R/A on August 8, 2016, for the operation of emission sources associated with their portable hot mix asphalt plant.

Pike has requested a minor revision to their license to add liquefied petroleum gas (LPG) as a licensed fuel for Asphalt Batch Plant (P825) and Hot Oil Heater P825A-HOH.

The equipment addressed in this license amendment is located at 53 Spaulding Road, Dover-Foxcroft, Maine.

B. Emission Equipment

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

Asphalt Plant

Equipment	Process Rate (tons/hour)	Design Capacity (MMBtu/hr)	Fuel Type, % sulfur	Control Device	Date of Manuf.
P825: Rotary Kiln	240	70.7	Distillate Fuel, 0.5%	Baghouse	1961
			Specification Waste Oil, 0.7%		
			LPG, negl.		

Heating Equipment

Equipment	Maximum Capacity (MMBtu/hr)	Fuel Type, % sulfur	Firing Rate	Date of Manuf.
P825-HOH (Hot Oil Heater)	1.4	Distillate Fuel, 0.5%	10.0 gph	2000
		Specification Waste Oil, 0.7%		
		LPG, negl.	14.9 gph	

C. 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.

This amendment will not increase emissions of any pollutant. Therefore, this amendment is determined to be a minor revision and has been processed as such.

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. Asphalt Batch Plant - P825

Asphalt Batch Plant (P825) is currently licensed to fire distillate fuel with a maximum sulfur content of 0.5% by weight and specification waste oil with a maximum sulfur content of 0.7% by weight. Pike has requested to add LPG as a fuel for Asphalt Batch Plant (P825). The Department has determined that no additional controls or restrictions are appropriate when firing LPG and that the following emission limits constitute BACT when firing LPG in Asphalt Batch Plant (P825).

BACT Findings

The BACT emission limits for Asphalt Batch Plant (P825) when firing LPG were based on the following:

- PM, PM₁₀ - 0.03 gr/dscf and the use of a baghouse
- SO₂ - 0.0046 lb/ton, based on AP-42 Table 11.1-5 dated 3/04
- NO_x - 0.025 lb/ton, based on AP-42 Table 11.1-5 dated 3/04
- CO - 0.40 lb/ton, based on AP-42 Table 11.1-5 dated 3/04
- VOC - 0.0082 lb/ton, based on AP-42 Table 11.1-6 dated 3/04
- Visible Emissions - 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Asphalt Batch Plant (P825) when firing LPG are the following:

<u>Unit</u>	<u>PM</u> <u>(lb/hr)</u>	<u>PM₁₀</u> <u>(lb/hr)</u>	<u>SO₂</u> <u>(lb/hr)</u>	<u>NO_x</u> <u>(lb/hr)</u>	<u>CO</u> <u>(lb/hr)</u>	<u>VOC</u> <u>(lb/hr)</u>
Asphalt Batch Plant (P825)	7.81	7.81	1.10	6.00	96.00	1.97

While firing LPG, visible emissions from the Asphalt Batch Plant (P825) baghouse shall not exceed 10% opacity on a six-minute block average basis,

C. P825 – Hot Oil Heater

The P825 Hot Oil Heater (HOH) is currently licensed to fire distillate fuel with a maximum sulfur content of 0.5% by weight and specification waste oil with a maximum sulfur content of 0.7% by weight. Pike has requested to add LPG as a fuel for P825-HOH. The Department has determined that no additional controls or restrictions are appropriate when firing LPG and that the following emission limits constitute BACT when firing LPG in the P825-HOH.

BACT Findings

The BACT emission limits for P825-HOH when firing LPG were based on the following:

- PM, PM₁₀ - 0.05 lb/MMBtu, 06-096 C.M.R. ch. 115, BACT
- SO₂ - 0.018 lb/10³ gal, based on AP-42 Table 1.5-1 dated 07/08, using 0.18 gr/100 ft³ as sulfur content for LPG
- NO_x - 13 lb/10³ gal, based on AP-42 Table 1.5-1 dated 07/08
- CO - 7.5 lb/10³ gal, based on AP-42 Table 1.5-1 dated 07/08
- VOC - 1.0 lb/10³ gal, based on AP-42 Table 1.5-1 dated 07/08
- Visible Emissions - 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for P825-HOH when firing LPG are the following:

<u>Unit</u>	<u>PM</u> <u>(lb/hr)</u>	<u>PM₁₀</u> <u>(lb/hr)</u>	<u>SO₂</u> <u>(lb/hr)</u>	<u>NO_x</u> <u>(lb/hr)</u>	<u>CO</u> <u>(lb/hr)</u>	<u>VOC</u> <u>(lb/hr)</u>
P825-HOH	0.07	0.07	0.03	0.19	0.11	0.01

While firing LPG, visible emissions from the P825-HOH shall not exceed 10% opacity on a six-minute block average basis.

D. Annual Emissions

This amendment does not affect the facility's licensed annual emissions because there will be no increase in emission limits or asphalt throughput.

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-75-71-X-M subject to the conditions found in Air Emission License A-75-71-W-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 Condition shall replace Condition (16) of Air Emission License A-75-71-W-R/A dated August 8, 2016:

(16) Asphalt Batch Plant - P825 (240 tons/hr)

A. Fuel Use

1. The asphalt plant is licensed to fire distillate fuel, specification waste oil and LPG. [06-096 C.M.R. ch. 115, BPT and BACT]
2. Prior to July 1, 2018, the facility shall fire distillate fuel with a maximum sulfur content not to exceed 0.5% by weight. [06-096 C.M.R. ch. 115, 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). [06-096 C.M.R. ch. 115, BPT]
4. Specification waste oil fired at the facility shall not exceed a maximum sulfur content of 0.7% by weight. [06-096 C.M.R. ch. 115, BPT]

B. The annual throughput of the asphalt batch plant shall not exceed 225,000 tons of asphalt per year on a 12-month rolling total basis. Records of asphalt production shall be kept on a monthly and 12-month rolling total basis. [06-096 C.M.R. ch. 115, BPT]

C. Emissions from the asphalt plant shall vent to a baghouse and to a dust re-injection system. All components of the asphalt plant shall be maintained so as to prevent PM leaks. [06-096 C.M.R. ch. 115, BPT]

D. The performance of the baghouse and dust re-injection system shall be constantly monitored by either one of the following at all times the batch asphalt plant is operating [06-096 C.M.R. ch. 115, BPT]:

1. PM Detector – When the detector signals excessive PM concentrations in the exhaust stream, Pike shall take corrective action within 24 hours, or immediately if opacity exceeds 20%.

2. Personnel with a current EPA Method 9 visible emissions certification – When visible emissions exceed 20% opacity, the asphalt plant is operating with insufficient control, and corrective action shall be taken immediately.
- E. To document maintenance of the baghouse, the licensee shall keep maintenance records recording the date and location of all bag failures as well as all routine maintenance and inspections. The maintenance and inspection records shall be kept on-site at the asphalt plant location. [06-096 C.M.R. ch. 115, BPT]
- F. While firing distillate fuel and/or specification waste oil, emissions from the asphalt plant baghouse shall not exceed the following: [06-096 C.M.R. ch. 115, BPT]

Pollutant	gr/dscf	lb/hr
PM	0.03	7.8
PM ₁₀	-	7.8
SO ₂	-	21.1
NO _x	-	28.8
CO	-	96.0
VOC	-	8.6

- G. While firing LPG, emissions from the asphalt plant baghouse shall not exceed the following: [06-096 C.M.R. ch. 115, BACT]

Pollutant	gr/dscf	lb/hr
PM	0.03	7.8
PM ₁₀	-	7.8
SO ₂	-	1.1
NO _x	-	6.0
CO	-	96.0
VOC	-	2.0

- H. While firing distillate fuel and/or specification waste oil, visible emissions from the baghouse are limited to no greater than 20% opacity on a six-minute block average basis, except for no more than two six-minute block averages in a continuous three-hour period, during which time visible emissions shall not exceed 60% opacity. [06-096 C.M.R. ch. 115, BPT]

- I. While firing LPG, visible emissions from the baghouse are limited to no greater than 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

- J. General process emissions from the asphalt plant shall be controlled so as to prevent visible emissions in excess of 20% opacity on a six-minute block average basis except for no more than one six-minute block average in a one-hour period. [06-096 C.M.R. ch. 115, BPT]

- K. Pike shall keep records of tons of asphalt produced for the asphalt batch plant which shall be maintained for at least six years and made available to the Department upon request. Records shall also be maintained recording the quantity and analyzed test results of all specification waste oil fired in the unit and the fuel sulfur content of the distillate fuel fired. [06-096 C.M.R. ch. 115, BPT]

- L. Pike may process up to 10,000 cubic yards per year of soil contaminated by gasoline or distillate fuel without prior approval from the Department. This limit may be exceeded with written authorization from the Department. The plant owner or operator shall notify the Department (regional inspector) at least 24 hours prior to processing the contaminated soil and specify the contaminating fuel and quantity, origin of the soil and fuel, and the disposition of the contaminated soil. [06-096 C.M.R. ch. 115, BPT]

- M. Pike may process up to 5,000 cubic yards per year of soil contaminated with virgin oil as defined in this license without prior approval from the Bureau of Air Quality. Processing of virgin oil contaminated soils may require a solid waste processing facility license under *Solid Waste Management Rules: Processing Facilities*, 06-096 C.M.R. ch. 409. The material shall be handled in accordance with the requirements of the Department's Bureau of Remediation and Waste Management. [06-096 C.M.R. ch. 115, BPT]

- N. Pike shall not process soils which are classified as hazardous waste or which have unknown contaminants. [06-096 C.M.R. ch. 115, BPT]

- O. When processing contaminated soils, Pike shall maintain records which specify the quantity and type of contaminant in the soil as well as the origin and characterization of the contaminated soil. In addition, when processing contaminated soil, Pike shall maintain records of processing temperature, asphalt feed rates, and dryer throughput on an hourly basis. The material shall be handled in accordance with the requirements of the Department's Bureau of Remediation and Waste Management. [06-096 C.M.R. ch. 115, BPT]

The following Condition shall replace Condition (17) of Air Emission License A-75-71-W-R/A dated August 8, 2016:

(17) P825-HOH

A. Fuel

1. The hot oil heater is licensed to fire distillate fuel, specification waste oil and Liquefied Petroleum Gas (LPG). [06-096 C.M.R. ch. 115, BACT and BPT]
2. Prior to July 1, 2018, distillate fuel fired at the facility shall have a maximum sulfur content not to exceed 0.5% by weight. [06-096 C.M.R. ch. 115, 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). [06-096 C.M.R. ch. 115, BPT]
4. Specification waste oil fired at the facility shall have a maximum sulfur content not to exceed 0.7% by weight. [06-096 C.M.R. ch. 115, BPT]
5. Compliance shall be demonstrated by fuel records from the supplier showing type, and the percent sulfur of the fuel delivered. [06-096 C.M.R. ch. 115, BPT]

B. While firing distillate fuel and/or specification waste oil, emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
P825-HOH	PM	0.12	A-75-71-S-A/R, dated February 14, 2016, BPT

C. While firing distillate fuel and/or specification waste oil, emissions shall not exceed the following [06-096 C.M.R. ch. 115, BPT]:

Unit	PM (lb/hr)	PM₁₀ (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
P825-HOH	0.17	0.17	1.03	0.20	0.05	0.01

D. While firing LPG, emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
P825-HOH	PM	0.05	06-096 C.M.R. ch. 115, BACT

E. While firing LPG, 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)
P825-HOH	0.07	0.07	0.03	0.19	0.11	0.01

F. While firing distillate fuel and/or specification waste oil, visible emissions from P825-HOH shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101]

G. While firing LPG, visible emissions from P825-HOH shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

DONE AND DATED IN AUGUSTA, MAINE THIS 1 DAY OF December, 2017.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Cone for
PAUL MERCER, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-75-71-W-R/A.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: April 28, 2017

Date of application acceptance: May 2, 2017

Date filed with the Board of Environmental Protection:

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

