



DEPARTMENT ORDER

**Pike Industries, Inc.
 Cumberland County
 Westbrook, Maine
 A-1109-71-B-M (SM)**

**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-1109-71-A-N on August 11, 2015, for the operation of emission sources associated with their portable drum mix asphalt plant.

Pike has requested a minor revision to their license in order to add liquefied petroleum gas (LPG) as a licensed fuel for Asphalt Batch Plant (P730) and Hot Oil Heater HYCGO-200.

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

B. Emission Equipment

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

Asphalt Plant

Equipment	Process Rate (tons/hr)	Design Capacity Firing Rate (MMBtu/hr)	Fuel Type, % Sulfur	Control Device	Date of Manuf.	Stack ID
Drum Mix Asphalt Plant – Pike #P730	350	100	Distillate Fuel, 0.5% S	Baghouse	1994	3
			#4 Fuel, 0.5% S			
			#6 Fuel, 0.5% S			
			Specification Waste Oil, 0.7% S			
			Natural Gas, negl. S			
LPG, negl. S						

Heating Equipment

<u>Equipment</u>	<u>Max. Input Capacity (MMBtu/hr)</u>	<u>Fuel Type, % Sulfur</u>	<u>Firing Rate</u>
HYCGO-200 (Hot Oil Heater)	2.1	Distillate Fuel, 0.5% S	15 gal/hr
		#4 Fuel, 0.5% S	15 gal/hr
		#6 Fuel, 0.5% S	15 gal/hr
		Specification Waste Oil, 0.7% S	15 gal/hr
		Natural Gas, negl. S	1,997 scf/hr
		LPG, negl. S	22.3 gal/hr

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 (P730)

Asphalt Batch Plant (P730) is currently licensed to fire distillate fuel, #4 fuel and #6 fuel, each with a maximum sulfur content of 0.5% by weight. Pike is also currently licensed to fire specification waste oil with a maximum sulfur content of 0.7% by weight, and natural gas. Pike has requested to add LPG as a fuel for Asphalt Batch Plant (P730). 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 (P730).

BACT Findings

The BACT emission limits for Asphalt Batch Plant (P730) when firing LPG were based on the following:

- PM, PM₁₀ – 0.03 gr/dscf and the use of a baghouse
- SO₂ – 0.034 lb/ton based on AP-42 Table 11.1-5 dated 03/04
- NO_x – 0.026 lb/ton based on AP-42 Table 11.1-5 dated 03/04
- CO – 0.13 lb/ton based on AP-42 Table 11.1-5 dated 03/04
- VOC – 0.032 lb/ton based on AP-42 Table 11.1-6 dated 03/04
- Visible Emissions – 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Asphalt Batch Plant (P730) 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>
Drum Mix Asphalt Plant (P730) LPG	9.65	9.65	1.19	9.10	45.50	11.20

While firing distillate fuel, #4 fuel, #6 fuel, residual fuel, specification waste oil, or any combination thereof, visible emissions from Asphalt Batch Plant (P730) baghouse shall not exceed 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. This is consistent with the PM limit of 20% opacity that is contained in *Standards of Performance for Hot Mix Asphalt Facilities*, 40 C.F.R. Part 60, Subpart I.

While firing natural gas or LPG, visible emissions from Asphalt Batch Plant (P730) baghouse shall not exceed 10% opacity on a six-minute block average basis.

C. HYCGO-200 Hot Oil Heater

The HYCGO-200 Hot Oil Heater is currently licensed to fire distillate fuel, #4 fuel, and #6 fuel, each with a maximum sulfur content of 0.5% by weight. Additionally, it is licensed to fire specification waste oil with a maximum sulfur content of 0.7% and natural gas. Pike has requested to add LPG as a fuel for this hot oil heater. 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 HYCGO-200 Hot Oil Heater.

BACT Findings

LPG

- PM/PM₁₀ - 0.05 lb/MMBtu, based on 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 emissions limits for the HYCGO-200 Hot Oil Heater 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>NOX</u> <u>(lb/hr)</u>	<u>CO</u> <u>(lb/hr)</u>	<u>VOC</u> <u>(lb/hr)</u>
HYCGO-200 Hot Oil Heater	0.01	0.01	0.01	0.29	0.17	0.02

While firing LPG, visible emissions from HYCGO-200 Hot Oil Heater shall not exceed 10% opacity on a six-minute block average.

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-1109-71-B-M, subject to the conditions found in Air Emission License A-1109-71-A-N, 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 conditions shall replace Condition (16) of Air Emission License A-1109-71-A-N dated August 11, 2015.

(16) Drum Mix Asphalt Plant (P730)

A. Fuel Use

1. Pike is licensed to fire distillate fuel, #4 fuel and #6 fuel with a maximum sulfur content of 0.5% by weight, specification waste oil with a maximum sulfur content of 0.7% by weight, natural gas and LPG. [06-096 C.M.R. ch. 115, BPT and BACT]
2. Pike shall be limited to a sitewide total of 112,000 MMBtu per year of fuel input, consisting of 800,000 gallons of distillate fuel or #4 or #6 fuel oil (with a sulfur content not to exceed 0.5% by weight), specification waste oil (with a sulfur content not to exceed 0.7% by weight), 108.7 million standard cubic feet of natural gas, or 1.2 million gallons per year of LPG, or any combination thereof, based on a 12-month rolling total, fired in the asphalt plant and hot oil heater combined. [06-096 C.M.R. ch. 115, BPT and BACT]

3. Beginning July 1, 2018, any distillate fuel fired at Pike shall have maximum sulfur content not to exceed 0.0015% by weight (15 ppm) except that any existing distillate fuel purchased or otherwise obtained by Pike prior to July 1, 2018 may be used until depleted. [06-096 C.M.R. ch. 115, BACT]
 4. Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and the percent sulfur of the fuel delivered. Records of annual fuel use shall be kept on a monthly and 12-month rolling total basis. [06-096 C.M.R. ch. 115, BACT]
 5. Fuel use records and receipts for the drum mix asphalt plant shall be maintained for at least six years and made available to the Department upon request. Fuel use records shall be kept on a monthly and 12-month rolling total basis. [06-096 C.M.R. ch. 115, BACT]
 6. A log shall be maintained recording the quantity and analyzed test results of all specification waste oil fired in the asphalt plant. [06-096 C.M.R. ch. 115, BACT]
- B. Emissions from the P730 asphalt plant shall vent to a baghouse, and all components of the asphalt plant shall be maintained so as to prevent PM leaks. [06-096 C.M.R. ch. 115, BACT]
- C. The performance of the baghouse shall be constantly monitored by either one of the following at all times the hot mix asphalt plant is operating [06-096 C.M.R. ch. 115, BACT]:
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 the opacity exceeds 20%, the asphalt plant is operating with insufficient control, and corrective action shall be taken immediately.
- D. To document maintenance of the baghouse, the licensee shall keep a maintenance log recording the date and location of all bag failures as well as all routine maintenance. The maintenance log shall be kept on-site at the asphalt plant location. [06-096 C.M.R. ch. 115, BACT]

- E. While P730 is firing distillate fuel, #4 fuel oil, #6 fuel oil or specification waste oil, or any combination thereof, emissions from the P730 baghouse shall not exceed the following [06-096 C.M.R. ch. 115, BACT]:

Pollutant	gr/dscf	lb/hr
PM	0.03	9.70
PM ₁₀	-	9.70
SO ₂	-	20.30
NO _x	-	19.25
CO	-	45.50
VOC	-	11.20

- F. While P730 is firing natural gas or LPG, emissions from the P730 baghouse shall not exceed the following [06-096 C.M.R. ch. 115, BACT]:

Pollutant	gr/dscf	lb/hr
PM	0.03	9.70
PM ₁₀	-	9.70
SO ₂	-	1.19
NO _x	-	9.10
CO	-	45.50
VOC	-	11.20

- G. While firing distillate fuel, #4 fuel, #6 fuel, residual fuel, specification waste oil, or any combination thereof, visible emissions from Asphalt Batch Plant (P730) baghouse shall not exceed 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]
- H. While firing natural gas or LPG, visible emissions from Asphalt Batch Plant (P730) baghouse shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]
- I. General process emissions from the drum mix asphalt plant shall be controlled so as to prevent visible emissions in excess of 20% opacity on a six (6)-minute block average basis, except for no more than one (1), six (6)-minute block average in a one (1)-hour period. [06-096 C.M.R. ch. 101]

- J. The drum mix asphalt plant is subject to 40 C.F.R. Part 60 Subparts A and I, and Pike shall comply with all applicable requirements, including the notification and recordkeeping requirements of 40 C.F.R. Part 60.7 and the initial performance test requirements of 40 C.F.R. Part 60.8 (testing within 60 days after achieving the maximum operation production rate, but not later than 180 days after initial startup.)
- K. Pike may process up to 10,000 cubic yards per year of soil contaminated by gasoline or #2 fuel oil 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, BACT]
- L. Pike shall not process soils which are classified as hazardous waste or which have unknown contaminants. [06-096 C.M.R. ch. 101]
- M. When processing contaminated soil, 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 Bureau of Remediation and Waste Management. [06-096 C.M.R. ch. 101]

The following conditions shall replace Condition (17) of Air Emission License A-1109-71-A-N dated August 11, 2015.

(17) HYCGO 200 Hot Oil Heater

A. Fuel

1. HYCGO 200 Hot Oil Heater is licensed to fire distillate fuel, #4 fuel, #6 fuel, specification waste oil, natural gas 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. The maximum sulfur content of #4 and #5 fuel oil fired at the facility shall not to exceed 0.5% by weight. [06-096 C.M.R. ch. 115, BPT]
5. 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]
6. Compliance shall be demonstrated by fuel records from the supplier showing 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 C.M.R. ch. 115, BACT]

B. Emissions shall not exceed the following:

<u>Unit</u>	<u>Pollutant</u>	<u>Fuel</u>	<u>lb/MMBtu</u>	<u>Origin and Authority</u>
HYCGO 200 Hot Oil Heater	PM	Distillate Fuel, #4 Fuel, #6 Fuel, Specification Waste Oil	0.12	A-1109-71-A-N, dated August 11, 2015, BPT and BACT
		Natural Gas, LPG	0.05	

C. While firing distillate fuel, #4 fuel, #6 fuel, specification waste oil, or any combination thereof, emissions shall not exceed the following [06-096 C.M.R. ch. 115, BPT]:

<u>Unit</u>	<u>PM (lb/hr)</u>	<u>PM10 (lb/hr)</u>	<u>SO2 (lb/hr)</u>	<u>NOX (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>
HYCGO 200 Hot Oil Heater	0.25	0.25	1.48	0.71	0.08	0.01

D. While firing natural gas or LPG, emissions shall not exceed the following [06-096 C.M.R. ch. 115, BPT and BACT]:

<u>Unit</u>	<u>PM (lb/hr)</u>	<u>PM10 (lb/hr)</u>	<u>SO2 (lb/hr)</u>	<u>NOX (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>
HYCGO 200 Hot Oil Heater	0.01	0.01	0.01	0.29	0.17	0.02

- E. While firing distillate fuel, #4 fuel, #6 fuel, residual fuel, specification waste oil, or any combination thereof, visible emissions from HYCGO 200 Hot Oil Heater shall not exceed 20% opacity on a six-minute block average basis, except for no more than one (1) six (6)-minute block average in a continuous three (3)-hour period. [06-096 C.M.R. ch. 115, BPT]

- F. While firing natural gas, visible emissions from HYCGO 200 Hot Oil Heater shall not exceed 10% opacity on a six-minute block average basis, except for no more than one (1) six (6)-minute block average in a continuous three (3)-hour period. [06-096 C.M.R. ch. 115, BPT]

- G. While firing LPG, visible emissions from HYCGO 200 Hot Oil Heater 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 6 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-1109-71-A-N.

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.

