

<b>PIKE INDUSTRIES, INC.</b>	)	<b>DEPARTMENTAL</b>
<b>OXFORD COUNTY</b>	)	<b>FINDINGS OF FACT AND ORDER</b>
<b>CANTON, MAINE</b>	)	<b>AIR EMISSION LICENSE</b>
<b>A-623-71-G-A (SM)</b>	)	

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 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

**I. REGISTRATION**

A. Introduction

Pike Industries, Inc. (Pike) located in Canton, Maine has applied to amend its Air Emission License which permits the operation of their crushed stone and gravel facility. Pike is seeking an amendment to include a portable hot mix asphalt (HMA) drum plant (**P726**) to their existing rock crusher (**C811**) plant.

B. New Emission Units

**Asphalt Plant (P726):**

Equipment	Process Rate (tons/hour)	Design Capacity Firing Rate	Control Devices	Stack Flow Rate (acfm)	Date of Manufacture
HMA Rotary Drum	300	100 MMBtu/hr, 714.3 gal/hr, #2 fuel and/or spec. waste oil	baghouse	50,350	1999

**Diesel Unit (G726):**

Source ID	Max. Capacity	Max. Firing Rate	Power Output
Gen. Set G726	7.17 MMBtu/hr	52.3 gal/hr	700 kW



defined in Definitions Regulation, 06-096 CMR 100 (last amended December 24, 2005). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

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.

A. Existing Equipment

Pike currently operates a primary rock crusher and a secondary rock crusher along with a 0.98 MMBtu/hr diesel generator. These units are permitted in Air Emissions License, A-623-71-F-R. Pike has requested to decrease the maximum yearly allowable diesel fuel for the diesel generator (Pike G811) from 25,000 gallons per calendar year to 10,000 gallons per calendar year. The emissions from this unit will be updated in Section II C. of this air license amendment.

B. New 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.

*Asphalt Plant*

Pike is requesting to install a drum mix asphalt plant (Pike P726) at their Canton facility. This portable asphalt plant was manufactured in 1999 and has operated in Vermont since that time. A new dryer drum was installed in 2004 on this unit. The portable drum mix asphalt plant has a kiln maximum firing rate of 100 MMBtu/hr and can process at a maximum finished material rate of 300 tons per hour and is therefore subject to EPA New Source Performance Standards (NSPS) Subpart I for Hot Mix Asphalt Facilities manufactured after June 11, 1973. Pike shall conduct an initial particulate matter concentration test (Method 5) and a visible emissions observation (Method 9) within 180 days of operation start-up per 40 CFR Part 60 Subpart I. The initial performance testing may not have been done at the time of drum replacement in 2004, therefore, Pike will do these tests per this license amendment.

The portable drum mix asphalt plant can fire #2 fuel oil which will meet the criteria in ASTM D396. Also the plant can fire #4 fuel oil and specification waste oil with a sulfur content not to exceed 0.7%. Total fuel use shall not exceed 320,000 gallons per calendar year. Regulated pollutants emitted from the rotary drum are particulate matter (PM), particulate matter with a diameter smaller than ten microns (PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), and volatile organic compounds (VOC). To meet the requirements of Best Practical Treatment (BPT) and NSPS for the control of particulate matter (PM) emissions, the batch mix asphalt plant shall vent to a baghouse. Opacity from the asphalt batch plant baghouse is limited to no greater than 20% on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period.

Based on the above hot mix batch asphalt plant process rate, the maximum emission rate from the asphalt baghouse shall be limited to 0.03 grs/dscf.

The performance of the baghouse shall be constantly monitored by either one of the following at all times the batch / drum mix asphalt plant is operating:

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 hot mix asphalt plant is operating with insufficient control and corrective action shall be taken immediately.

General process emissions from the 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 1-hour period.

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 commissioner 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.

Of the total 10,000 cubic yards, Pike may process up to 5,000 cubic yards per year of soil contaminated with virgin oil as defined by the Bureau of Air Quality without prior approval from the Bureau of Air Quality. Virgin oil processing shall be done at a mixture of no greater than 30% contaminated soil to 70% clean aggregate mix. Processing of virgin oil contaminated soils may require a solid waste processing facility license under Maine Solid Waste Management Rules, 06-096 CMR 409 (last amended June 16, 2006). The material shall be handled in accordance with the requirements of the Bureau of Remediation and Waste Management.

**Virgin Oil Definition:**

Virgin oil means any petroleum derived oil, including petroleum fuels, unused motor oils, hydraulic fluids, lubrication oils and other industrial oils, that are not characterized as waste oil.

Pike shall not process soils which are classified as hazardous waste or which have unknown contaminants.

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 Bureau of Remediation and Waste Management.

*Diesel Generator (Pike G726)*

The diesel unit is used primarily to power the portable asphalt drum plant. The diesel unit was manufactured in 1999 and was operated and installed at a Pike facility in Vermont since that time. Therefore, the generator was not purchased after July 11, 2005 and manufactured after April 1, 2006 and is not subject to New Source Performance Standards 40 CFR Part 60, Subpart III, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

A summary of the BACT analysis for the generator (G726) rated at a maximum design capacity of 7.2 MMBtu/hr is the following:

1. The total fuel use for the generator shall not exceed 70,000 gallons per calendar year of diesel fuel with a maximum sulfur content not to exceed 0.05% by weight.
2. Low Sulfur Fuel, 06-096 CMR 106 (last amended July 4, 1999) regulates fuel sulfur content, however in this case a BPT analysis for SO<sub>2</sub> determined a more stringent limit of 0.05% was appropriate and shall be used.
3. Fuel Burning Equipment Particulate Emission Standard, 06-096 CMR 103 (last amended November 3, 1990) regulates PM emission limits. The PM<sub>10</sub> limits are derived from the PM limits.
4. NO<sub>x</sub>, CO, and VOC emission limits are based upon AP-42 data dated 10/96.
5. Visible emissions from the generator shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period.

*Hot oil heater (P726-1)*

The hot oil heater is used to keep the asphalt from congealing. The heater has a maximum design capacity rated at 1.5 MMBtu/hr based on the maximum fuel input of 10.7 gallons per hour. The heater can fire #2 fuel oil, #4 fuel oil and/or waste oil. The asphalt plant and the hot oil heater share the same fuel tank and therefore will have the same fuel type and sulfur content requirements. The fuel oil used in this unit is part of the total facility-wide fuel limit of 320,000 gallons per year, however, to estimate emissions for fee purposes, the maximum amount of fuel (operating 8760 hours per year) that can be fired in the heater is approximately 87,000 gallons. To meet BACT, visible emissions from the heater shall not exceed 20% opacity on a 6-minute block average and the fuel shall meet the criteria specified in ASTM D396 for #2 fuel oil.

*Stock Piles and Roadways*

Visible emissions from a fugitive emission source shall not exceed an opacity of 20%, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20% in any one (1) hour.

*General Process Emissions*

Visible emissions from a general process (including conveyor belts) shall not exceed an opacity of 10% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period.

C. Facility Emissions and Fuel Use Caps

Based on the process rate of 300 tons per hour of Hot Mix Asphalt (HMA) and the maximum fuel use of 320,000 gallons/year of ASTM D396 #2 fuel, #4 oil, and specification waste oil for the HMA plant; the maximum licensed allowed limit of 70,000 gallons per year for the new diesel unit; a maximum of 10,000 gallons per year for the existing diesel unit; and a maximum of 87,000 gallons per year (only for fee purposes) combusted in the oil heater unit; the total allowable annual emissions for the facility are as follows:

**Total Licensed Annual Emissions for the Facility**

(used to calculate the annual license fee)

<u>Equipment</u>	<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>
Asphalt Drum Plant (P726)	1.9	1.9	11.3	3.7	8.7	2.2
Existing Diesel (G811)	0.1	0.1	0.1	3.0	0.7	0.3
Diesel Engine (G726)	0.6	0.6	0.3	15.3	4.6	1.7
Hot oil heater (P726-1)	0.7	0.7	3.1	2.4	0.2	0.1
<b>TOTALS</b>	<b>3.3</b>	<b>3.3</b>	<b>14.8</b>	<b>24.4</b>	<b>14.2</b>	<b>4.3</b>

III. AMBIENT AIR QUALITY ANALYSIS

According to 06-096 CMR 115, the level of air quality analyses required for a renewal source shall be determined on a case-by-case basis. Modeling and monitoring are not required of a renewal if the total emissions of any pollutant released do not exceed the following:

<b>Pollutant</b>	<b>TPY</b>
PM	25
PM10	25
SO2	50
NOx	100
CO	250

Based on the above total facility emissions, Pike is below the emissions level required for modeling and monitoring.

PIKE INDUSTRIES, INC.  
OXFORD COUNTY  
CANTON, MAINE  
A-623-71-G-A (SM)

)  
) **DEPARTMENTAL**  
) **FINDINGS OF FACT AND ORDER**  
) **AIR EMISSION LICENSE**  
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## 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-623-71-G-A, subject to the conditions found in Air Emissions License, A-623-71-F-R, and to the following conditions.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License 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**

**(1) The following shall replace Condition (17) b. of Air Emission License A-623-71-F-R:**

- (17) b. Pike shall not exceed the total use of 10,000 gal/year of diesel fuel (on a calendar year basis), with a sulfur content not to exceed 0.05% by weight. Emissions from the diesel unit shall be limited to the following

Pollutant	Lb/hr	TPY
PM	0.12	0.1
PM <sub>10</sub>	0.12	0.1
SO <sub>2</sub>	0.01	0.1
NO <sub>x</sub>	4.32	3.0
CO	0.93	0.7
VOC	0.34	0.3

[06-096 CMR 115, BPT]

**(2) The following are new Conditions to be included in Air Emission License A-623-71-F-R:**

(24) Batch Mix Asphalt Plant

- A. Emissions from the hot mix 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 CMR 115, BPT]
- B. The performance of the baghouse shall be constantly monitored by either one of the following at all times the batch mix asphalt plant is operating [06-096 CMR 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 the opacity exceeds 20%, the asphalt plant is operating with insufficient control and corrective action shall be taken immediately.
- C. To document maintenance of the baghouse, the license 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 CMR 115, BPT]
- D. Opacity from the baghouse is limited to no greater than 20% on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 101]
- E. General process emissions from the 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 1-hour period. [06-096 CMR 101]
- F. Fuel use records and receipts for the asphalt drum mix asphalt plant shall be maintained for at least six years and made available to the Department upon request. A log shall also be maintained recording the quantity and analyzed test results of all specification waste oil in the dryer. [06-096 CMR 115, BPT]
- G. Pike shall be limited to the use of 320,000 gallons per calendar year of #2 fuel oil, #4 fuel oil, and specification waste oil in the batch mix asphalt plant. The fuel oil shall meet the criteria of ASTM D396 for #2 oil. The #4 fuel oil and specification waste oil shall have a maximum fuel sulfur content not to exceed 0.7% by weight. Emissions from the baghouse shall not exceed the following [06-096 CMR 115, BPT]:

Pollutant	grs/dscf	lb/hr
PM	0.03	8.4
PM <sub>10</sub>	-	8.4
SO <sub>2</sub>	-	50.4
NO <sub>x</sub>	-	16.5
CO	-	39.0
VOC	-	9.6

- H. Pike shall conduct an initial particulate matter concentration test (Method 5) and a opacity test (Method 9) within 180 days of operation start-up per 40 CFR Part 60 Subpart I. [06-096 CMR 115, BPT]
- I. 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 commissioner 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. [38 MSRA §608-A, and 06-096 CMR 115, BPT]
- J. Pike may process up to 5,000 cubic yards per year, as part of the 10,000 cubic yards total, of soil contaminated with virgin oil as defined by the Bureau of Air Quality without prior approval from the Bureau of Air Quality. Virgin oil processing shall be done at a mixture of no greater than 30% contaminated soil to 70% clean aggregate mix. Processing of virgin oil contaminated soils may require a solid waste processing facility license under MEDEP Chapter 409. The material shall be handled in accordance with the requirements of the Bureau of Remediation and Waste Management. [06-096 CMR 115, BPT]
- K. Pike shall not process soils which are classified as hazardous waste or which have unknown contaminants. [06-096 CMR 115, BPT]
- L. 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 Bureau of Remediation and Waste Management. [06-096 CMR 115, BPT]

M. Pike shall notify the Bureau of Air Quality regional inspector at least 7 days prior to processing soil contaminated with anything other than #2 fuel oil or gasoline. [06-096 CMR 115, BPT]

**(25) Diesel Unit (G726)**

- A. Pike shall obtain a delivery ticket from each fuel supplier for each shipment of fuel oil received which indicates the name, address, and telephone number of the fuel oil supplier and which verifies that the diesel fuel being delivered contains no more than 0.05% sulfur by weight. Pike Industries shall retain these records for at least six years and make them available to the Department upon request. [06-096 CMR 115, BPT]
- B. Pike Industries, Inc. shall not exceed the total use of 70,000 gallons per year of diesel fuel (calendar year basis), with a sulfur content not to exceed 0.05% by weight. Emissions from the diesel unit shall be limited to the following:

<b>Emission Unit</b>	<b>Pollutant</b>	<b>lb/MMBtu</b>	<b>Origin and Authority</b>
Generator (G726)	PM	0.12	06-096 CMR 103(2)(B)(1)(a)

<b>Pollutant</b>	<b>lb/hr</b>
PM	0.9
PM <sub>10</sub>	0.9
SO <sub>2</sub>	0.4
NO <sub>x</sub>	31.8
CO	6.8
VOC	2.5

C. Visible emissions shall not exceed an opacity of 30% on a six-minute block average, except for no more than 2 six-minute block averages in a 3-hour period. [06-096 CMR 101]

**(26) Hot Oil Heater (P726-1)**

- A. Pike shall fire fuel oil that meets the criteria of ASTM D396 for #2 fuel oil in the oil heater and/or #4 fuel oil and specification waste oil that has less than 0.7% sulfur content by weight. [06-096 CMR 115, BPT]

B. Emissions from the oil heating unit shall be limited to the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Oil Heater (P726-1)	PM	0.12	06-096 CMR 103(2)(B)(1)(a)

Pollutant	lb/hr
PM	0.2
PM <sub>10</sub>	0.2
SO <sub>2</sub>	0.8
NO <sub>x</sub>	0.6
CO	0.1
VOC	0.1

C. Visible emissions from the heater shall not exceed 20% opacity on a 6-minute block average. [06-096 CMR 101]

(27) **Stockpiles and Roadways**

Visible emissions from a fugitive emission source shall not exceed an opacity of 20%, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20% in any one (1) hour. [06-096 CMR 101]

(28) **General Process Sources**

Visible emissions from any general process source shall (including conveyor belts) not exceed an opacity of 10% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. [06-096 CMR 101 and 06-096 CMR 115, BPT]

(29) The Hot Mix Asphalt Plant is subject to 40 CFR Part 60 Subparts A, and I and Pike shall comply with the notification and recordkeeping requirements of 40 CFR Part 60.7.

(30) **Equipment Relocation** [06-096 CMR 115, BPT]

A. Pike shall notify the Bureau of Air Quality, by a written notification at least 48 hours prior to relocation of any equipment carried on this license. Written notice may be sent by mail, facsimile (fax), or e-mail. Notification sent by mail shall be sent to the address below or to a Department Regional Office:

PIKE INDUSTRIES, INC.  
OXFORD COUNTY  
CANTON, MAINE  
A-623-71-G-A (SM)

)  
) DEPARTMENTAL  
) FINDINGS OF FACT AND ORDER  
) AIR EMISSION LICENSE  
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Attn: Relocation Notice  
Maine DEP  
Bureau of Air Quality  
17 State House Station  
Augusta, ME 04333-0017

Equipment relocation notification can also be done on-line with e-notice at [www.maine.gov/dep/air/compliance/forms/relocation](http://www.maine.gov/dep/air/compliance/forms/relocation).

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 will be made to the respective county commissioners.
- (31) Pike shall keep a copy of this Order on site, and have the operator(s) be familiar with the terms of this Order. [06-096 CMR 115, BPT]
- (32) Pike 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.A. §605-C].

DONE AND DATED IN AUGUSTA, MAINE THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ 2008.  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
DAVID P. LITTELL, COMMISSIONER

**The term of this amendment shall be concurrent with the term of Air Emission License A-623-71-F-R**

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: May 1, 2008  
Date of application acceptance: May 8, 2008  
Date filed with the Board of Environmental Protection: \_\_\_\_\_

This Order prepared by Edwin Cousins, Bureau of Air Quality.

**PIKE INDUSTRIES, INC.  
OXFORD COUNTY  
CANTON, MAINE  
A-623-71-G-A (SM)**

) **DEPARTMENTAL**  
) **FINDINGS OF FACT AND ORDER**  
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