STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
COMMISSIONER

Pike Industries, Inc.
Somerset County
Fairfield, Maine
A-624-71-G-R/A (SM)

Departmental
Findings of Fact and Order
Air Emission License
Renewal/Amendment

After review of the air emission license renewal 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., §344 and §590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Pike Industries, Inc. (Pike) owns and operates rock crushing and associated mineral processing equipment at its Fairfield, Maine location. The company has applied to renew their Air Emission License permitting the operation of their crushed stone and gravel facility. This air emission license also includes an existing piece of equipment inadvertently overlooked in previous licensing actions, a generator which powers the currently licensed jaw crusher (crusher identification number C625-AB).

The equipment addressed in this license operates at 15 Pike Drive, Fairfield, Maine. The main office is located at 58 Main Street, Westbrook, Maine.

B. Emission Equipment

Rock Crushers

Emission Unit #	Type of Equipment	Process Rate, tons/hour	Date of Manufacture	Control Device
C625-AB	Jaw Crusher (Primary)	250	1980	Water spray
30641-2	Roll Crusher (Secondary)	150	1964	Water Spray

Generator Units

Emission Unit	Max. Input, MMBtu/hr	Max. Firing Rate, gal/hr	Fuel Type	Power Output	Date of Manuf.
Generator G30641	2.9	21.8	diesel fuel, 0.0015% sulfur	449 hp	1984
Generator G625-AB	3.1	22.7		335 kW	1996

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04679-2094
(207) 764-0477 FAX: (207) 760-3143

web site: www.maine.gov/dep

C. Application Classification

The application for Pike is considered to be a renewal of current licensed emission units and a license modification to include an additional emission unit per *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended). With the fuel use limit on the diesel units, the facility is licensed below the major source thresholds and is considered a synthetic minor.

The modification of a minor source is identified as a major or a minor modification based on whether or not expected emission increases exceed the "Significant Emission Levels" as defined in 06-096 CMR 100. The emission increases are determined by subtracting the current licensed emissions preceding the modification from the maximum future licensed allowed emissions, as follows:

Pollutant	Currently Licensed Emissions (TPY)	Future Licensed Emissions (TPY)	Emissions Change (TPY)	Significant Emission Levels (TPY)
PM	0.3	0.4	0.1	100
PM_{10}	0.3	0.4	0.1	100
SO_2	0.1	0.01	0.09	100
NO_x	7.6	15.2	7.6	100
CO	1.6	3.2	1.6	100
VOC	0.6	1.2	0.6	50
CO_2e*	285	570	285	100,000

* Greenhouse gases (GHG) are quantified as carbon dioxide equivalents (CO_2e).

This modification is determined to be a minor modification 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 CMR 100 (as amended). 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.

B. Rock Crushers

The primary rock crusher (C625-AB) was manufactured in 1980 with a rated capacity of 250 tons/hour, and the secondary rock crusher (30641-2, formerly C641) was manufactured in 1964 with a rated capacity of 150 tons/hour. The crushers are used to crush Recycled Asphalt Pavement (RAP). Based on the dates that these units were manufactured, the primary and secondary rock crushers are not subject to EPA New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart OOO for Nonmetallic Mineral Processing Plants manufactured after August 31, 1983, with capacities greater than 150 tons/hr for portable plants and greater than 25 tons/hr for non-portable plants. Few changes or updates have occurred to this equipment since the original manufactured date.

The regulated pollutant from the rock crushers is particulate emissions. To meet the requirements of Best Practical Treatment (BPT) for control of particulate matter (PM) emissions from the rock crushers, Pike shall maintain water sprays on the rock crushers and operate as needed to control visible emissions. Visible emissions from the rock crushers shall be limited to no greater than 10% opacity on a six (6) minute block average basis.

C. Generators

The diesel units are used primarily to power the primary and secondary rock crushers. Regulated air pollutants from diesel burning units include particulate matter (PM), particulate matter with diameter less than ten microns (PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC).

Generator G30641, manufactured in 1984, has a maximum capacity of 2.9 MMBtu/hr (449 hp) and fires diesel fuel. The generator is a 3406 CAT (2WB00953) Engine.

Generator G625-AB, manufactured in 1996, has a maximum capacity of 3.1 MMBtu/hr (335 kW) and fires diesel fuel. Though this unit is new to the air emission license for this facility, it has been powering the jaw crusher in Maine since 1996, but was previously overlooked in the licensing process. It is a portable unit used to crush RAP which spends most of its operating time at the Fairfield location.

Generators G30641 and G625-AB were both manufactured prior to April 1, 2006; therefore, these two generators are <u>not</u> subject to NSPS 40 CFR Part 60, Subpart

IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.*

Generators G30641 and G625-AB are considered non-road engines, as opposed to stationary engines, since Generators G30641 and G625-AB are portable and will be moved to various sites with the crushers. Therefore, Generators G30641 and G625-AB are not subject to 40 CFR Part 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.* The definition in 40 CFR Part 1068.30 states that a non-road engine is an internal combustion engine that meets certain criteria, including the following: "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 CFR 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 for an engine located at a seasonal source. An engine located at a seasonal source is an engine that remains at a seasonal source during the full annual operating period of the seasonal source; or 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.

The BACT/BPT emission limits for Generators G30641 and G625-AB were based on the following:

PM, PM_{10} –0.12 lb/MMBtu, 06-096 CMR 103(2)(B)(1)(a)
SO_2 – 0.0015 lb/MMBtu, based on combustion of diesel fuel with a maximum sulfur content of 0.0015% by weight
NO_X – 4.41 lb/MMBtu from AP-42, Table 3.3-1, dated 10/96
CO – 0.95 lb/MMBtu from AP-42, Table 3.3-1, dated 10/96
VOC – 0.36 lb/MMBtu from AP-42, Table 3.3-1, dated 10/96
Opacity – 06-096 CMR 101

Emissions shall not exceed the following:

Emissions, lb/hr:	**PM**	**PM_{10}**	**SO_2**	**NO_X**	**CO**	**VOC**
Generator G30641 (2.9 MMBtu/hr)	0.3	0.3	0.004	12.8	2.8	1.0
Generator G625-AB (3.1 MMBtu/hr)	0.4	0.4	0.005	13.7	2.9	1.1

Visible emissions shall not exceed 20% opacity on a 6-minute block average basis, except for no more than two (2) 6-minute block averages in a 3-hour period.

The total combined fuel use for Generators G30641 and G625-AB shall not exceed 50,000 gallons per calendar year of diesel fuel with a maximum sulfur content not to exceed 0.0015% by weight.

D. Stock Piles and Roadways

Visible emissions from any fugitive emission source shall not exceed 20% opacity, 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.

E. General Process Emissions

Visible emissions from any general process (crusher conveyor belts, bucket elevators, bagging operations, truck loading operations, etc.) shall not exceed 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.

F. Facility Emissions

1. *Total Licensed Annual Emissions*
Pike shall be restricted to the following annual emissions, on a calendar year basis. The tons per year limits were calculated based on 25,000 gal/year diesel fuel fired in each generator.

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

Unit	PM	PM_{10}	SO_2	NO_x	CO	VOC
Generator G30641	0.2	0.2	0.003	7.6	1.6	0.6
Generator G625-AB	0.2	0.2	0.003	7.6	1.6	0.6
Total TPY	**0.4**	**0.4**	**0.01**	**15.2**	**3.2**	**1.2**

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 (CO_2e).

Based on the facility's fuel use limits, the worst case emission factors from AP-42, IPCC (Intergovernmental Panel on Climate Change), and *Mandatory Greenhouse Gas Reporting*, 40 CFR Part 98, and the global warming potentials contained in 40 CFR Part 98, Pike is below the major source threshold of 100,000 tons of CO_2e per year. No additional licensing requirements are needed to address GHG emissions at this time.

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 is not required for a renewal if the total emissions of any pollutant released do not exceed the following and there are no extenuating circumstances:

Pollutant	Tons/Year
PM	25
PM_{10}	25
SO_2	50
NO_x	100
CO	250

Based on the total facility licensed emissions, Pike is below the emissions level required for modeling.

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 A-624-71-G-R/A (SM), subject 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.

STANDARD CONDITIONS

(1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions. [06-096 CMR 115]

(2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 CMR 115]

(3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]

(4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]

(5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to 38 M.R.S.A. § 353-A. [06-096 CMR 115]

(6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]

(7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]

(8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]

(9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an

application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]

(10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]

(11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall comply with the following [06-096 CMR 115]:

A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
   1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
   2. pursuant to any other requirement of this license to perform stack testing.

B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to conduct emission testing; and

C. submit a written report to the Department within thirty (30) days from date of test completion.

(12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:

A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and

B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and

C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

[06-096 CMR 115]

(13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]

(14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]

(15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

SPECIFIC CONDITIONS

(16) **Rock Crushers**

A. Pike shall install and maintain spray nozzles for particulate control on the Rock Crushers and operate them as necessary to limit visible emissions to no greater than 10% opacity on a six (6) minute block average basis. [06-096 CMR 115 (BPT) and 06-096 CMR 101]

B. Pike shall maintain a log detailing and quantifying the hours of operation on a daily basis for the primary and secondary rock crushers. The operation log shall be kept on-site at the rock crushing location. [06-096 CMR 115, BPT]

C. Pike shall maintain a log detailing the maintenance on particulate matter control equipment (including spray nozzles). Pike shall perform monthly inspections of any water sprays to ensure water is flowing to the correct locations and initiate corrective action within 24 hours if water is found to not be flowing properly. Records of the date of each inspection and any corrective action required will be included in the maintenance log. The maintenance log shall be kept on-site at the rock crushing location. [06-096 CMR 115, BPT]

D. The crushers shall not be attached or clamped via cable, chain, turnbuckle, bolt, or other means (except electrical connections) to any anchor, slab, or structure (including bedrock) that must be removed prior to transportation. [06-096 CMR 115, BPT]

(17) **Generators G30641 and G625-AB**

A. Fuel Use
1. Generators G30641 and G625-AB shall fire only diesel fuel with a maximum sulfur content not to exceed 0.0015% sulfur by weight. [06-096 CMR 115, BACT/BPT]
2. Total combined fuel use for Generators G30641 and G625-AB shall not exceed 50,000 gal/yr of diesel fuel. Compliance shall be demonstrated by fuel records from the supplier showing the quantity and type of fuel delivered. Records of annual fuel use shall be kept on a monthly and calendar year basis. [06-096 CMR 115, BPT]

B. Emissions from Generators G30641 and G625-AB shall not exceed the following [06-096 CMR 115, BPT]:

Emissions, lb/hr:	PM	PM_{10}	SO_2	NO_X	CO	VOC
Generator G30641 (2.9 MMBtu/hr)	0.3	0.3	0.004	12.8	2.8	1.0
Generator G625-AB (3.1 MMBtu/hr)	0.4	0.4	0.005	13.7	2.9	1.1

C. Visible emissions from each 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. [06-096 CMR 101]

(18) **Stockpiles and Roadways**

Visible emissions from a fugitive emission source shall not exceed 20% opacity, 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]

(19) **General Process Sources**

Visible emissions from any general process (crusher conveyor belts, bucket elevators, bagging operations, truck loading operations, etc.) shall not exceed 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 115, BPT]

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

A. Pike shall notify the Bureau of Air Quality, by a written notification, 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:

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.

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.

(21) 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]

(22) 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].

DONE AND DATED IN AUGUSTA, MAINE THIS 14th DAY OF June , 2012.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Melanie Loyzim for
PATRICIA W. AHO, COMMISSIONER

The term of this license shall be five (5) years from the signature date above.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: March 8, 2012
Date of application acceptance: March 12, 2012

Date filed with the Board of Environmental Protection:

This Order prepared by Jane Gilbert, Bureau of Air Quality.

Filed
JUN 14 2012
State of Maine
Board of Environmental Protection