



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE  
GOVERNOR

PATRICIA W. AHO  
COMMISSIONER

**The Lane Construction Corporation  
Washington County  
Charlotte, Maine  
A-978-71-D-A (SM)**

**Departmental  
Findings of Fact and Order  
Air Emission License  
Amendment #1**

**FINDINGS OF FACT**

After review of the air emissions 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 (Department) finds the following facts:

**I. REGISTRATION**

**A. Introduction**

1. The Lane Construction Corporation (Lane) was issued Air Emission License A-978-71-C-R/A on June 10, 2013 permitting the operation of emission sources associated with their hot mix asphalt plant and crushed stone and gravel facility.
2. Lane has requested an amendment to their license to remove the Cummins 855 generator, replacing it with the CAT C-15 generator, and to add the PRI 2240 CR Crusher. Both the CAT C-15 and the PRI 2240 CR crusher were previously licensed on Lane's air emission license A-352-71-L-R, which was surrendered in November 2013.
3. The equipment addressed in this license is based at 2 Crushed Rock Road, Charlotte, ME.

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 04769  
(207) 764-0477 FAX: (207) 760-3143

B. Emission Equipment

The following equipment is addressed in this air emission license:

**Generators**

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Manuf. Date</u>	<u>Install. Date</u>
CAT C-15	4.6	33.5	Distillate, 0.0015%	2008	2008

**Rock Crushers**

<u>Unit</u>	<u>Powered</u>	<u>Process Rate (tons/hour)</u>	<u>Date of Manufacture</u>	<u>Control Device</u>
PRI 2240 CR	Distillate	140	1970	Spray Nozzles

C. Application Classification

The modification of a minor source is considered a major or minor modification based on whether or not expected emission increases exceed the "Significant Emission Levels" as defined in the Department's regulations. The emission increases are determined by subtracting the current licensed emissions preceding the modification from the maximum future licensed allowed emissions, as follows:

<u>Pollutant</u>	<u>Current License (TPY)</u>	<u>Future License (TPY)</u>	<u>Net Change (TPY)</u>	<u>Significance Level</u>
PM	4.4	4.4	0.0	100
PM <sub>10</sub>	4.4	4.4	0.0	100
SO <sub>2</sub>	8.2	8.2	0.0	100
NO <sub>x</sub>	22.8	22.8	0.0	100
CO	21.5	21.5	0.0	100
VOC	5.7	5.7	0.0	50
CO <sub>2</sub> e	-	<100,000	<100,000	100,000

This modification is determined to be a minor modification and has been processed as such.

## II. BEST PRACTICAL TREATMENT (BPT)

### A. Introduction

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 CMR 100 (as amended). 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. CAT C-15 Generator

The CAT C-15 generator has a maximum capacity of 4.6 MMBtu/hr firing distillate fuel. The generator was manufactured and installed in 2008.

Lane shall be subject to a facility limit of 50,000 gallons per year of distillate fuel, with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur), on a calendar year basis, for all three generators, combined.

The CAT C-15 generator was manufactured after April 1, 2006. Therefore, the CAT C-15 is subject to New Source Performance Standards 40 CFR Part 60, Subpart III, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*. By meeting the requirements of Subpart III, the CAT C-15 generator also meets the requirements found in the *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 CFR Part 63, Subpart ZZZZ.

The BACT emission limits for the CAT C-15 generator were based on the following:

PM/PM10	- 0.12 lb/MMBtu from 06-096CMR 103
SO2	- combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur)
NOx	- 3.2 lb/MMBtu from AP-42, Table 3.4-1, dated 10/96
CO	- 0.85 lb/MMBtu from AP-42, Table 3.4-1, dated 10/96
VOC	- 0.09 lb/MMBtu from AP-42, Table 3.4-1, dated 10/96
Opacity	09-096 CMR 101

The BACT emission limits for the generator is the following:

<u>Unit</u>	<u>PM</u> (lb/hr)	<u>PM<sub>10</sub></u> (lb/hr)	<u>SO<sub>2</sub></u> (lb/hr)	<u>NO<sub>x</sub></u> (lb/hr)	<u>CO</u> (lb/hr)	<u>VOC</u> (lb/hr)
CAT C-15 Generator	0.55	0.55	0.01	14.72	3.91	0.41

Visible emissions from the CAT C-15 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 three (3)-hour period.

#### A. Rock Crushers

The primary rock crusher, PRI 2240 CR is a portable unit which was manufactured in 1970 with rated capacity of 140 tons per hour.

The PRI 2240 CR rock crusher is *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 per hour for portable plants and greater than 25 tons per hour for non-portable plants.

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, 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.

B. Annual Emissions

1. Total Annual Emissions

Lane shall be restricted to the following annual emissions, based on a calendar year basis. The tons per year limits were calculated based on:

- 700,000 gallons per year of specification waste oil or distillate fuel, or 95,150,000 standard cubic feet of natural gas per year, or 1,083,000 gallons of propane, or any combination thereof, not to exceed a total heat input of 98,000 MMBtu/year, fired in the asphalt plant and hot oil heater combined, and
- 50,000 gallons per year of distillate fuel fired in the three generators combined

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

<u>Unit</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 Plant & Hot Oil Heater	3.95	3.95	8.12	7.70	18.20	4.48
Generators	0.42	0.42	0.1	15.10	3.25	1.20
<b>Total TPY</b>	<b>4.4</b>	<b>4.4</b>	<b>8.2</b>	<b>22.8</b>	<b>21.5</b>	<b>5.7</b>

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<sub>2</sub>e).

Based on the facility's fuel use limit(s), 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, Lane is below the major source threshold of 100,000 tons of CO<sub>2</sub>e per year. Therefore, no additional licensing requirements are needed to address GHG emissions at this time.

### III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source shall be 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 emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

<b>Pollutant</b>	<b>Tons/Year</b>
PM <sub>10</sub>	25
SO <sub>2</sub>	50
NO <sub>x</sub>	50
CO	250

The total facility licensed emissions 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, and
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-978-71-D-A subject to the conditions found in Air Emission License A-978-71-C-R/A and in 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.

**The following Specific Conditions (24), (25) and (26) shall be added to Air Emission License A-978-71-C-R/A.**

(24) The Cummins 855 Generator and all references thereto, shall be deleted from Air Emission License A-978-71-C-R/A.

(25) **CAT C-15 Generator**

A. Fuel Use

1. The CAT C-15 Generator shall fire only distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur). [06-096 CMR 115, BACT]
2. Total facility fuel use for the three licensed generators shall not exceed 50,000 gallons per year of distillate 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 shall not exceed the following:

<u>Unit</u>	<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>Origin and Authority</u>
CAT C-15	PM	0.12	06-096 CMR 103(2)(B)(1)(a)

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

<u>Unit</u>	<u>PM</u> <u>(lb/hr)</u>	<u>PM<sub>10</sub></u> <u>(lb/hr)</u>	<u>SO<sub>2</sub></u> <u>(lb/hr)</u>	<u>NO<sub>x</sub></u> <u>(lb/hr)</u>	<u>CO</u> <u>(lb/hr)</u>	<u>VOC</u> <u>(lb/hr)</u>
CAT C-15	0.55	0.55	0.01	14.72	3.91	0.41

- D. Visible emissions from the CAT C-15 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 three (3)-hour period. [06-096 CMR 101]
- E. 40 CFR Part 60, Subpart IIII

The federal regulation 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE)* is applicable to the generator listed above since the unit was ordered after July 11, 2005 and manufactured after April 1, 2006. By meeting the requirements of Subpart IIII, the units also meet the requirements found in the *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 CFR Part 63, Subpart ZZZZ.

40 CFR Part 60, Subpart IIII Requirements:

(1) Manufacturer Certification Requirement

The generator shall be certified by the manufacturer as meeting the emission standards for new non-road compression ignition engines found in 40 CFR §60.4202. [40 CFR §60.4205(b)]

(2) Ultra-Low Sulfur Distillate Fuel Requirement

The distillate fuel fired in the generator shall not exceed 15 ppm sulfur (0.0015% sulfur), except that any existing distillate fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. [40 CFR §60.4207(b)]

(3) Non-Resettable Hour Meter Requirement

A non-resettable hour meter shall be installed and operated on the generator. [40 CFR §60.4209(a)]

(4) Operation and Maintenance Requirements

The generator shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by facility that are approved by the engine manufacturer. Lane may only change those emission-related settings that are permitted by the manufacturer. [40 CFR §60.4211(a)]

(5) Annual Time Limit for Maintenance and Testing

The generator shall be limited to 100 hours per year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours per year of the 100 hours per year may be used in non-emergency situations (this does not include peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity unless the conditions in §60.4211(f)(3)(i) are met). [40 CFR §60.4211(f)]

(6) Initial Notification Requirement

Lane shall comply with all notification, reporting and record keeping requirements. [40 CFR §60.4214(a)]

(26) **Rock Crusher PRI 2240 CR**

- A. Lane shall install and maintain spray nozzles for particulate control on Rock Crusher PRI 2240 CR 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. Lane shall maintain a log detailing and quantifying the hours of operation on a daily basis for Rock Crusher PRI 2240 CR. The operation log shall be kept on-site at the rock crushing location. [06-096 CMR 115, BPT]
- C. Lane shall maintain a log detailing the maintenance on particulate matter control equipment (including spray nozzles). Lane 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 crusher 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]

DONE AND DATED IN AUGUSTA, MAINE THIS 24 DAY OF September, 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marie Allen Robert Cone for  
PATRICIA W. AHO, COMMISSIONER

**The term of this amendment shall be concurrent with the term of Air Emission License A-978 -71-C-R/A.**

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 10/25/2013

Date of application acceptance: 10/28/2013

Date filed with the Board of Environmental Protection:

This Order prepared by N. Lynn Cornfield, Bureau of Air Quality.

