

# STATE OF MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION 17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

#### **DEPARTMENT ORDER**

Eurovia Atlantic Coast LLC d/b/a Northeast Paving Washington County Charlotte, Maine A-978-71-G-A Departmental
Findings of Fact and Order
Air Emission License
Amendment #3

#### 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 (the Department) finds the following facts:

## I. REGISTRATION

# A. Introduction

Air Emission License A-978-71-C-R/A was issued to the Lane Construction Corporation on June 10, 2013, for the operation of emission sources associated with their hot mix asphalt and crushed stone facility. The license was subsequently amended on September 24, 2014 (A-978-71-D-A), transferred to Eurovia Atlantic Coast LLC d/b/a Northeast Paving (Eurovia) on April 18, 2019 (A-978-71-E-T), and amended on June 14, 2021 (A-978-71-F-M).

Eurovia has requested an amendment to their license in order to add a new generator designated Generator #1 and remove the existing Deutz F3L912 generator. The visible emissions standards for the existing CAT 3406 generator will also be updated to reflect the latest standards as found in the Department's *Visible Emissions Regulation*, 06-096 Code of Maine Rules (C.M.R.) ch.101.

The equipment addressed in this license amendment is located at 2 Crushed Rock Rd, Charlotte, Maine.

# B. Emission Equipment

The following equipment is addressed in this Air Emission License Amendment:

## **Engines**

Unit ID	Max. Capacity (MMBtu/hr)	Max. Firing Rate (gal/hr)	Fuel Type, % sulfur	Date of Manuf.
Generator #1	3.5	25.1	distillate fuel,	2019
Deutz F3L912 (removed)	0.9	6.5	0.0015%	1984

Departmental
Findings of Fact and Order
Air Emission License
Amendment #3

# C. Definitions

Distillate Fuel means the following:

• Fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials (ASTM) in ASTM D396;

2

- · Diesel fuel oil numbers 1 or 2, as defined in ASTM D975;
- · Kerosene, as defined in ASTM D3699;
- · Biodiesel, as defined in ASTM D6751; or
- · Biodiesel blends, as defined in ASTM D7467.

<u>Records</u> or <u>Logs</u> mean either hardcopy or electronic records.

# D. 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.

The modification of a minor source is considered a major or minor modification based on whether or not expected emissions increases exceed the "Significant Emissions" levels as defined in the Department's *Definitions Regulation*, 06-096 C.M.R. ch. 100. The emissions increases are determined by subtracting the current licensed annual emissions preceding the modification from the maximum future licensed annual emissions, as follows:

	Current License	<b>Future License</b>	Net Change	Significant
Pollutant	(TPY)	(TPY)	(TPY)	<b>Emissions Levels</b>
PM	4.4	4.4	0.0	100
$PM_{10}$	4.4	4.4	0.0	100
$SO_2$	8.2	8.2	0.0	100
$NO_x$	22.8	22.8	0.0	100
CO	21.5	21.5	0.0	100
VOC	5.7	5.7	0.0	100

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

## E. Facility Classification

With the annual fuel limit on the generators and the annual throughput limit on the asphalt plant, the facility is licensed as follows:

· As a synthetic minor source of air emissions for NOx, because Eurovia is subject to license restrictions that keep facility emissions below major source thresholds for criteria pollutants; and

Departmental
Findings of Fact and Order
Air Emission License
Amendment #3

· As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for HAP.

3

## 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 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 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. Generator #1

Generator #1 is a stationary engine used to power the #67 Drum Hot Mix Asphalt Plant. Generator #1 has a maximum capacity of 3.5 MMBtu/hr (375 KW), firing distillate fuel. The generator was manufactured in 2019 and is a Caterpillar Generator Model XQ425. The fuel fired in Generator #1 combined with the existing generators at this facility shall be limited to 50,000 gallons/year on a calendar year total basis of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight). This fuel limit shall apply regardless of where the units are operated.

Model year 2019 stationary non-emergency engines were required to be certified to a Tier 4 standard as listed in 40 C.F.R. § 1039.101, Table 1. Generator #1 is eligible to be used as a stationary non-emergency generator because it is certified to this standard according to EPA Certificate of Conformity number KCPXL12.5HTF.

# 1. BACT Findings

The BACT emission limits for Generator #1 were based on the following:

$PM, PM_{10}$	- 0.12 lb/MMBtu from 06-096 C.M.R. ch. 103
$SO_2$	- combustion of distillate fuel with a maximum sulfur content not to
	exceed 15 ppm (0.0015% sulfur 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	- 0.35 lb/MMBtu from AP-42, Table 3.3-1 dated 10/96
Viailala	06 006 CMD at 115 DACT

Visible - 06-096 C.M.R. ch. 115, BACT

**Emissions** 

# Departmental Findings of Fact and Order Air Emission License Amendment #3

The BACT emission limits for Generator #1 are the following:

Unit	Pollutant	lb/MMBtu
Generator #1	PM	0.12

	PM	PM <sub>10</sub>	SO <sub>2</sub>	NOx	CO	VOC
Unit	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
Generator #1	0.41	0.41	0.01	15.16	3.27	0.31

Visible emissions from Generator #1 shall not exceed 20% opacity on a six-minute block average basis.

## 2. New Source Performance Standards

Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 C.F.R. Part 60, Subpart IIII is applicable to the engine listed above since the unit was ordered after July 11, 2005, and manufactured after April 1, 2006. [40 C.F.R. § 60.4200] By meeting the requirements of 40 C.F.R. Part 60, Subpart IIII, the unit also meets the requirements found in the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 C.F.R. Part 63, Subpart ZZZZ. [40 C.F.R. § 63.6590(c)]

A summary of the currently applicable federal 40 C.F.R. Part 60, Subpart IIII requirements is listed below.

# a. Manufacturer Certification Requirement The engine shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in 40 C.F.R. § 60.4201. [40 C.F.R. § 60.4204(b)]

b. Ultra-Low Sulfur Fuel Requirement The fuel fired in the engine shall not exceed 15 ppm sulfur (0.0015% sulfur). [40 C.F.R. § 60.4207(b)]

# c. Diesel Particulate Filter

(1) The diesel particulate filter on Generator #1 shall be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. [40 C.F.R. § 60.4209(b)]

# Departmental Findings of Fact and Order Air Emission License Amendment #3

- (2) Eurovia shall keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached. [40 C.F.R. § 60.4214(c)]
- d. Operation and Maintenance Requirements

  The engine shall be operated and maintained according to the manufacturer's emission-related written instructions. Eurovia may only change those emission-related settings that are permitted by the manufacturer.

  [40 C.F.R. § 60.4211(a)]

# C. Annual Emissions

The table below provides an estimate of facility-wide annual emissions for the purposes of calculating the facility's annual air license fee and establishing the facility's potential to emit (PTE). Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, unquantifiable fugitive particulate matter emissions are not included except when required by state or federal regulations. Maximum potential emissions were calculated based on the following assumptions:

- Firing 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 per year, 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
- Firing 50,000 gal/year of distillate fuel in the generators.

Please note, this information should not be construed to represent a comprehensive list of license restrictions or permissions. That information is provided in the Order section of this license.

# **Total Licensed Annual Emissions for the Facility Tons/year**

(used to calculate the annual license fee)

	PM	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Asphalt Plant & Hot Oil Heater	3.95	3.95	8.12	7.70	18.20	4.48
Generators	0.41	0.41	0.01	15.10	3.25	1.20
Total TPY	4.4	4.4	8.2	22.8	21.5	5.7

Pollutant	Tons/year
Single HAP	9.9
Total HAP	24.9

# Departmental Findings of Fact and Order Air Emission License Amendment #3

# III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source is determined by the Department on a case-by case basis. In accordance with 06-096 C.M.R. ch. 115, an ambient air quality impact analysis is not required for a minor source if the total licensed annual emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

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

The total licensed annual emissions for the facility 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 amendment.

## **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-978-71-G-A, subject to the conditions found in Air Emission License A-978-71-C-R/A, in amendments A-978-71-D-A, A-978-71-E-T, and A-978-71-F-M, and the following conditions.

<u>Severability</u>. 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.

Departmental
Findings of Fact and Order
Air Emission License
Amendment #3

## **SPECIFIC CONDITIONS**

The following shall replace Specific Condition (18) of Air Emission License A-978-71-C-R/A.

## (18) Generators

## A. Fuel Use

- 1. The CAT 3406 and Generator #1 are licensed to fire distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight). Compliance shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of the tank containing the fuel to be fired. [06-096 C.M.R. ch. 115, BPT]
- 2. Total fuel use for the CAT 3406 and Generator #1 combined shall not exceed 50,000 gal/yr of distillate fuel, regardless of where the units are operated. 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 C.M.R. ch. 115, BPT]

# B. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
CAT 3406	PM	0.12	06-096 C.M.R. ch. 103 § (2)(B)(1)(a)
Generator #1	PM	0.12	06-096 C.M.R. ch. 103 § (2)(B)(1)(a)

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

	PM	PM <sub>10</sub>	SO <sub>2</sub>	NOx	CO	VOC
Unit	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
CAT 3406	0.37	0.37	0.01	13.76	2.96	1.09
Generator #1	0.41	0.41	0.01	15.16	3.27	0.31

## D. Visible Emissions

Visible emissions from Generator #1 shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

# Departmental Findings of Fact and Order Air Emission License Amendment #3

Visible emissions from the CAT 3406 shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time Eurovia may comply with the following work practice standards in lieu of the numerical visible emissions standard. [06-096 C.M.R. ch. 101, § 3(A)(4)]

8

- 1. Maintain a log (written or electronic) of the date, time, and duration of all generator startups.
- 2. Operate the CAT 3406 in accordance with the manufacturer's emission-related operating instructions.
- 3. Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations shall apply.
- 4. Operate the CAT 3406, including any associated air pollution control equipment, at all times in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the unit.
- E. Generator #1 shall meet the applicable requirements of 40 C.F.R. Part 60, Subpart IIII, including the following: [incorporated under 06-096 C.M.R. ch. 115, BACT]
  - Manufacturer Certification
     The engine shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in § 60.4201.

     [40 C.F.R. § 60.4204(b)]
  - 2. Ultra-Low Sulfur Fuel

The fuel fired in the engine shall not exceed 15 ppm sulfur (0.0015% sulfur). Compliance with the fuel sulfur content limit shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of the tank containing the fuel to be fired.

[40 C.F.R. § 60.4207(b) and 06-096 C.M.R. ch. 115, BACT]

Departmental
Findings of Fact and Order
Air Emission License
Amendment #3

## 3. Diesel Particulate Filter

- a. The diesel particulate filter on Generator #1 shall be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. [40 C.F.R. § 60.4209(b)]
- b. Eurovia shall keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached. [40 C.F.R. § 60.4214(c)]

# 4. Operation and Maintenance

Done and dated in augusta, maine this  $16^{th}$  day of MAY, 2022.

The engine shall be operated and maintained according to the manufacturer's emission-related written instructions. Eurovia may only change those emission-related settings that are permitted by the manufacturer.

[40 C.F.R. § 60.4211(a)]

DEPAR	RTMENT OF ENVIRONMENTAL PROTECTION
BY:	MELANIE LOVZIM COMMISSIONER
	MELANIE LOYZIM, COMMISSIONER
	erm of this amendment shall be concurrent with the term of Air Emission Licens -71-C-R/A.
	PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 4/22/22

Date of application acceptance: 4/22/22

Date filed with the Board of Environmental Protection:

This Order prepared by Chris Ham, Bureau of Air Quality.

# **FILED**

MAY 16, 2022

State of Maine Board of Environmental Protection