



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI  
GOVERNOR

DAVID P. LITTELL  
COMMISSIONER

**R. F. Jordan & Sons  
Construction, Inc.  
Hancock County  
Ellsworth, Maine  
A-1002-71-B-A**

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

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

**I. REGISTRATION**

**A. Introduction**

1. R. F. Jordan & Sons Construction, Inc. (R. F. Jordan) of Ellsworth, Maine was issued Air Emission License A-1002-71-A-N on January 6, 2009, permitting the operation of a crushed stone and gravel facility.
2. R. F. Jordan has requested an amendment to their license to add a rental rock crusher and rental diesel generator.

**B. Emission Equipment**

**Rock Crushers**

<u>Designation</u>	<u>Powered</u>	<u>Process Rate (tons/hour)</u>	<u>Date of Manufacture</u>	<u>Control Device</u>
Rental JCI K300	Rental CAT 3408	400	2008	Spray Nozzles

**Diesel Units**

<u>Source ID</u>	<u>Max. Capacity</u>	<u>Max. Firing Rate</u>	<u>Fuel Type</u>
Rental CAT 3408	2.8 MMBtu/hr	20.4 gal/hr	diesel fuel, 0.05% sulfur

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17 STATE HOUSE STATION  
AUGUSTA, MAINE 04333-0017  
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PORTLAND  
312 CANCO ROAD  
PORTLAND, MAINE 04103  
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE  
1235 CENTRAL DRIVE, SKYWAY PARK  
PRESQUE ISLE, MAINE 04769-2094  
(207) 764-0477 FAX: (207) 760-3143

C. Application Classification

The modification of a minor source is considered a major 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:

Pollutant	Current License (TPY)	Future License (TPY)	Change (TPY)	Significance Level (TPY)
PM	0.21	0.42	0.21	100
PM <sub>10</sub>	0.21	0.42	0.21	100
SO <sub>2</sub>	0.09	0.18	0.09	100
NO <sub>x</sub>	7.55	15.10	7.55	100
CO	1.63	3.26	1.63	100
VOC	0.60	1.20	0.60	50

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 (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 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.

B. Rock Crusher

The Rental JCI K300 rock crusher is a portable unit manufactured in 2008 with a rated capacity of 400 tons per hour. The Rental JCI K 300 rock crusher is therefore subject to EPA New Source Performance Standards (NSPS) 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.

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, R. F. Jordan shall maintain water sprays on the rock crusher and operate as needed to control visible emissions. Visible emissions from the rock crusher shall be limited to no greater than 10% opacity on a six (6) minute block average basis.

C. Diesel Units

The Rental Generator is a CAT 3408 Generator utilized to power the Rental JCI K300 Rock Crusher. The Rental CAT 3408 generator was manufactured in 1993, and is therefore not subject to New Source Performance Standards, 40 CFR 60, Subpart IIII, Standards of Performance for Stationery Compression Ignition Internal Combustion Engines.

A summary of the BACT analysis for the Rental CAT 3408 is the following:

1. The total fuel use for the generators shall not exceed 25,000 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 BACT analysis for SO<sub>2</sub> determines 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.

D. Facility Emissions

R. F. Jordan shall be restricted to the following annual emissions, based on a calendar year:

**Total Licensed Annual Emissions for the Facility**  
(Used to calculate the annual license fee)

	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>VOC</b>
Rental CAT 3408	0.21	0.21	0.09	7.55	1.63	0.60
CAT C7 Generator	0.21	0.21	0.09	7.55	1.63	0.60
<b>Total TPY</b>	<b>0.4</b>	<b>0.4</b>	<b>0.2</b>	<b>15.1</b>	<b>3.3</b>	<b>1.2</b>

**III. AMBIENT AIR QUALITY ANALYSIS**

According to 06-096 CMR 115, the level of air quality analyses required for a minor 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><u>Pollutant</u></b>	<b><u>TPY</u></b>
PM	25
PM <sub>10</sub>	25
SO <sub>2</sub>	50
NO <sub>x</sub>	100
CO	250

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

### 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 A-1002-71-B-A, subject to the conditions found in Air Emission A-1002-71-A-N, 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.

#### STANDARD CONDITIONS

The following shall replace Specific Conditions 16, 17 and 18 of Air Emission License A-1002-71-A-N:

(16) **Rock Crushers -**

- A. R. F. Jordan shall install and maintain spray nozzles for particulate control on the Rental and the Pioneer 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. R. F. Jordan shall maintain a log detailing the maintenance on the water spray nozzles. The maintenance log shall be kept on-site at the rock crushing location. [06-096 CMR 115, BPT]
- C. R. F. Jordan shall maintain a log detailing and quantifying the hours of operation on a daily basis for the Rental and the Pioneer rock crushers. The operation 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) **New Source Performance Standards for Rock Crushers**

- A. The Rental and the Pioneer rock crushers are subject to 40 CFR Part 60 Subparts A and OOO. R. F. Jordan shall comply with the notification and record keeping requirements of 40 CFR Part 60.676 and Part 60.7, except for Section (a)(2) of 60.7 per Subpart OOO, §60.676(h).
- B. R. F. Jordan had an initial performance test performed on the rock crushing operation per the applicable sections of 40 CFR Part 60, Subpart OOO, §60.675, on July 1, 2009.

(18) **Diesel Units**

- A. Total fuel use for the Rental CAT 3408 and the CAT C7 Generators shall not exceed 25,000 gallons per calendar year, each, of ASTM D396 #2 fuel oil with a maximum sulfur content not to exceed 0.05% by weight. Compliance shall be based on fuel receipts from the supplier showing the quantity of fuel delivered and the percent sulfur of the fuel. Records of annual fuel use shall be kept on an annual basis. [06-096 CMR 115, BPT]
- B. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Rental CAT 3408	PM	0.12	06-096 CMR 103(2)(B)(1)(a)
CAT C7	PM	0.12	06-096 CMR 103(2)(B)(1)(a)

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

Emission Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Rental CAT 3408	0.34	0.34	0.14	12.35	2.66	0.98
CAT C7	0.20	0.20	0.08	7.25	1.56	0.58

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D. Visible emissions from diesel units shall each 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]

DONE AND DATED IN AUGUSTA, MAINE THIS *14<sup>th</sup>* DAY OF *August* 2009.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: *James P. Brooker*  
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DAVID P. LITTELL, COMMISSIONER

**The term of this amendment shall be concurrent with the term of Air Emission License A-1002-71-A-N.**

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 5/22/2009

Date of application acceptance: 5/26/2009

Date filed with the Board of Environmental Protection: \_\_\_\_\_

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

