



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
COMMISSIONER

**Marcou Construction Company, Inc.
Cumberland County
Westbrook, Maine
A-895-71-E-R/A**

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

FINDINGS OF FACT

After review of the air emissions license renewal 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

Marcou Construction Company, Inc. (Marcou) has applied to renew their Air Emission License permitting the operation of emission sources associated with their portable crushed stone and gravel facility.

Marcou has requested an amendment to their license in order to replace existing Generator #1 with a new generator, designated Generator #2, which has an EPA Interim Tier 4 emission rating.

The main office for Marcou is located at 15 Holmes Road, Dunbarton in the State of New Hampshire. However, the equipment addressed in this license is permitted by both the State of New Hampshire and the State of Maine and is used at various rock crushing operation sites within each state. Most recently the equipment, while in the State of Maine, was located at 737 Spring Street in Westbrook, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

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

Rock Crushers

<u>Equipment</u>	<u>Powered</u>	<u>Max. Design Capacity</u>	<u>Date of Construct.</u>	<u>Control Devices</u>
Crusher #1 (Lippman Jaw Crusher)	Generator #2	450 tons/hr	2002	Water Sprays
Crusher #2 (Nordberg Cone Crusher)	Generator #2	450 tons/hr	1995	Water Sprays
Crusher #3 (275Metso Cone Crusher)	Generator #2	350 tons/hr	1992	Water Sprays
Crusher #4 (Telsmith Cone Crusher)	Generator #2	275 tons/hr	2001	Water Sprays
Screen #1 *	Generator #2	350 tons/hr	2004	Water Sprays
Screen #2 *	Generator #2	275 tons/hr	2003	Water Sprays
Screen #4 *	Generator #2	275 tons/hr	2001	Water Sprays

* Noted for inventory purposes only.

Generators

<u>Equipment</u>	<u>Power Output</u>	<u>Heat Input Capacity</u>	<u>Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Date of Manuf.</u>
Generator #1 ** (Caterpillar 3412)	800 BkW	8.1 MMBtu/hr	58.6	Distillate Fuel, 0.0015% S	2005
Generator #2 (Caterpillar C27)	815 BkW	7.3 MMBtu/hr	53.2	Distillate Fuel, 0.0015% S	2014

** Generator #1 was removed and replaced by Generator #2.

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 *Definitions Regulation*, 06-096 CMR 100 (as amended). The emission increases are determined by subtracting the current licensed annual emissions preceding the modification from the maximum future licensed annual emissions, as follows:

<u>Pollutant</u>	<u>Current License (TPY)</u>	<u>Future License (TPY)</u>	<u>Net Change (TPY)</u>	<u>Significant Emission Levels</u>
PM	0.5	0.1	- 0.4	100
PM ₁₀	0.5	0.1	- 0.4	100
SO ₂	0.2	0.1	- 0.1	100
NO _x	13.3	3.6	- 9.7	100
CO	3.5	3.6	+ 0.1	100
VOC	0.4	0.4	0.0	50
CO ₂ e	< 100,000	< 100,000	0.0	100,000

This modification is determined to be a minor modification and a renewal and has been processed as such through *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (CMR) 115 (as amended). The facility is licensed below the major source thresholds for hazardous air pollutants (HAP) and is considered an area source of HAP.

II. BEST PRACTICAL TREATMENT (BPT)

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.

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. Rock Crushers

The rock crushers, designated Crushers #1, #2, #3, and #4, are portable units which were manufactured in 2002, 1995, 1992, and 2001 with rated capacities of 450 tons/hr, 450 tons/hr, 350 tons/hr, and 275 tons/hr, respectively.

1. BPT Findings

The regulated pollutant from the rock crushers is particulate matter emissions. To meet the requirements of BPT for control of particulate matter emissions from the rock crushers, Marcou 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.

2. New Source Performance Standards

Rock Crushers #1, #2, #3, and #4 are 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. Crushers #1, #2, #3, and #4 have all undergone the required initial performance test and demonstrated compliance with the required emission levels. The initial performance tests for Crushers #1-#3 occurred on April 27, 2006, and the performance test for Crusher #4 occurred on August 20, 2009.

C. Generator #2

Existing Generator #1 was replaced with Generator #2. Generator #2 is a portable engine used to power the rock crushing and screen units. Generator #2 has a maximum capacity of 7.3 MMBtu/hr (815 brake kW power output rating), firing distillate fuel. The generator was manufactured in 2014 and is a Caterpillar C27 model. The fuel fired in Generator #2 shall be limited to 60,000 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).

1. BACT Findings

The BACT emission limits for Generator #2 were based on the following:

- PM/PM₁₀ - 0.10 g/BkW-hr based on being certified to EPA Tier 4 Interim limits
- SO₂ - Combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
- NO_x - 3.50 g/BkW-hr based on being certified to EPA Tier 4 Interim limits
- CO - 3.50 g/BkW-hr based on being certified to EPA Tier 4 Interim limits
- VOC - 0.40 g/BkW-hr based on being certified to EPA Tier 4 Interim limits
- Opacity - 06-096 CMR 101

The BACT emission limits for Generator #2 are the following:

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

<u>Unit</u>	<u>PM</u> <u>(lb/hr)</u>	<u>PM₁₀</u> <u>(lb/hr)</u>	<u>SO₂</u> <u>(lb/hr)</u>	<u>NO_x</u> <u>(lb/hr)</u>	<u>CO</u> <u>(lb/hr)</u>	<u>VOC</u> <u>(lb/hr)</u>
Generator #2	0.18	0.18	0.01	6.29	6.29	0.72

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

2. New Source Performance Standards

Generator #2 is considered a non-road engine, as opposed to a stationary engine, since Generator #2 is portable and will be moved to various crushing operation sites within the State of Maine. Therefore, Generator #2 is not subject to New Source Performance Standards 40 CFR Part 60, Subpart III, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*.

3. National Emission Standards for Hazardous Air Pollutants

Generator #2 is considered a non-road engine, as opposed to a stationary engine, since it is portable and will be moved to various crushing operation sites within the State of Maine. Therefore, Generator #2 is not subject to 40 CFR Part 63, Subpart ZZZZ, *National Emission 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: "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 (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) is an engine that remains at a seasonal source during the full annual operating period of the seasonal source.

D. Fugitive Emissions

Visible emissions from a fugitive emission source (including stockpiles and roadways) 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.

E. General Process Emissions

Visible emissions from any general process (including conveyor belts, transfer points, etc.) associated with an NSPS rock crusher shall not exceed an opacity of 10% on a six (6) minute block average basis.

Visible emissions from any other general process (non-NSPS crusher conveyor belts, bucket elevators, bagging operations, truck loading operations, etc.) shall not exceed an opacity 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.

F. Annual Emissions

1. Total Annual Emissions

Marcou shall be restricted to the following annual emissions, based on a calendar year. The tons per year limits were calculated based on 60,000 gallons/year of distillate fuel:

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

	PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Generator #2	0.1	0.1	0.01	3.6	3.6	0.4
Total TPY	0.1	0.1	0.01	3.6	3.6	0.4

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 (CO₂e).

Based on the facility's fuel use limit, 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, Marcou is below the major source threshold of 100,000 tons of CO₂e 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 licensed annual emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

<u>Pollutant</u>	<u>Tons/Year</u>
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.

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-895-71-E-R/A 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 (38 M.R.S.A. §347-C).
- (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 Title 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:
 - 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 allow emission testing; and
 - C. submit a written report to the Department within thirty (30) days from date of test completion.
[06-096 CMR 115]
- (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 emissions 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. Marcou shall install and maintain spray nozzles for particulate control on Rock Crushers #1, #2, #3, and #4, and operate them as necessary to limit visible emissions from each crusher 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. Marcou shall maintain a log detailing and quantifying the hours of operation on a daily basis for all of the rock crushers. The operation log shall be kept on-site at the rock crushing location. [06-096 CMR 115, BPT]
- C. Marcou shall maintain a log detailing the maintenance on particulate matter control equipment (including spray nozzles). Marcou 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 shall 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]
- E. Rock Crushers #1, #2, #3, and #4 are subject to 40 CFR Part 60 Subparts A and OOO and Marcou 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).

(17) Generator #2

A. Fuel Use

- 1. Generator #2 is licensed to fire distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight). [06-096 CMR 115, BACT]
- 2. Total fuel use for Generator #2 shall not exceed 60,000 gallons/year of distillate fuel. Compliance shall be demonstrated by fuel records from the supplier showing the quantity and type of fuel delivered, and the sulfur content of the fuel. Records of annual fuel use shall be kept on a monthly and calendar year total basis. [06-096 CMR 115, BACT]

B. Emissions shall not exceed the following:

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

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

<u>Unit</u>	<u>PM (lb/hr)</u>	<u>PM₁₀ (lb/hr)</u>	<u>SO₂ (lb/hr)</u>	<u>NO_x (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>
Generator #2	0.18	0.18	0.01	6.29	6.29	0.72

D. Visible emissions from Generator #2 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) **Fugitive Emissions**

Visible emissions from a fugitive emission source (including stockpiles and roadways) 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]

(19) **General Process Sources**

Visible emissions from any general process (including conveyor belts, transfer points, etc.) associated with an NSPS rock crusher shall not exceed an opacity of 10% on a six (6) minute block average basis. [40 CFR 60, Subpart OOO]

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

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

A. Marcou shall notify the Bureau of Air Quality, by a written notification, prior to relocation of any equipment carried on this license. It is preferred for a notice of relocation to be submitted through the Department's on-line e-notice at: www.maine.gov/dep/air/compliance/forms/relocation

Written notice may also be sent by fax (207-287-7641) or mail. Notification sent by mail shall be sent to the address below:

Marcou Construction Company, Inc.
Cumberland County
Westbrook, Maine
A-895-71-E-R/A

12

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

Attn: Relocation Notice
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017

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 shall be made to the respective county commissioners.
- (21) Marcou 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) Marcou 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 29 DAY OF October, 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Corne for
PATRICIA W. AHO, COMMISSIONER

The term of this license shall be ten (10) years from the signature date above.

[Note: If a complete renewal application, as determined by the Department, is submitted prior to expiration of this license, then pursuant to Title 5 MRSA §10002, all terms and conditions of the license shall remain in effect until the Department takes final action on the renewal of the license.]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 08/08/2014

Date of application acceptance: 08/15/2014

Date filed with the Board of Environmental Protection:

This Order prepared by Allison M. Hazard, Bureau of Air Quality.

