



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
COMMISSIONER

Harry C. Crooker & Sons, Inc.)
Lincoln County) Departmental
Whitefield, Maine) Findings of Fact and Order
A-507-71-F-R/A) Air Emissions License

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., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

1. Harry C. Crooker & Sons, Inc. (Crooker) has applied to renew their Air Emission License, permitting the operation of their Whitefield, Maine crushed rock and gravel facility.
2. The Crooker Whitefield pit air emission license is being amended to include a new diesel engine to drive the crusher that will replace the formally licensed Diesel #1 (532kW).
3. The physical address of Crooker's Whitefield pit is Thayer Road, Whitefield, Maine.

B. Emission Equipment

Crooker is requesting to include the following equipment to the facility's air emission license:

Rock Crushers:

Designation	Power Source	Process Rate (tons/hour)	Control Device	Date of Manufacturer
Primary	Diesel Generator	260	Spray Nozzles	1972
Secondary	Diesel Generator	225	Spray Nozzles	1972

Diesel Unit:

Equipment	Max Capacity (MMBtu/hr)	Power Output (kW)	Fuel Type, % Sulfur	Max Firing Rate (gal/hr)	Stack #
The Portable Diesel	8.8	905	Diesel, 0.05%	62.9	2

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
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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
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C. Application Classification

This air emission license renewal includes the addition of a seasonally operated diesel engine. Therefore, the license is considered to be a renewal and amendment of current licensed emission units only and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended).

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 emission from the source being considered; and
- the economic feasibility for the type of establishment involved.

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. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Rock Crushers

Crooker operates a primary and secondary rock crusher at their Whitefield pit. The primary and secondary rock crushers were manufactured in 1972 and have since undergone overhaul to increase the capacities of the crushers. Modifications to the crushers have increased their capacities from 125 tons per hour each to 260 tons per hour for the primary rock crusher and 225 tons per hour for the secondary rock crusher. Therefore, the primary and secondary rock crushers are 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.

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To satisfy NSPS Subpart OOO, Crooker was required to perform an initial performance test on the rock crushing operation as per 40 CFR Part 60, Subpart OOO, §60.675. This consists of a certified EPA Method 9 visible emissions observation. The primary and secondary crushers at the Crooker Whitefield site underwent Subpart OOO Method 9 visible emissions testing on June 1, 2009 as documented in the application for this Air Emission License renewal.

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, Harry Crooker & Sons, Inc. shall maintain and operate water sprays on the rock crushers at the Whitefield pit in such a manner as to control visible emissions to no greater than 10% opacity on a 6-minute block average basis.

C. Portable Diesel

Crooker was formally licensed to operate Diesel #1, a 532 kW CAT 3412c engine as the primary power source for the primary and secondary rock crushers. This engine malfunctioned and has been removed from the facility's equipment inventory. Crooker has replaced Diesel #1 with a new diesel engine, designated the Portable Diesel. The Portable Diesel is a 905 kW CAT C27 engine with a heat input capacity of 8.8 MMBtu/hr and was manufactured and installed in 2010. As with Diesel #1, the Portable Diesel will be operated seasonally at both the Whitefield (A-507-71-F-R/A) and Topsham (A-187-71-L-R/A) Crooker facilities and will be included on both facilities' air emission licenses.

The Portable Diesel is considered a non-road engine, as opposed to a stationary engine, since the engine is portable and is transferred between Crooker's Whitefield pit and Topsham facility through out the year. Therefore, the Portable Diesel is not subject to 40 CFR Part 60, Subpart III, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* or 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: "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.

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BACT for the diesel unit shall continue to be a total annual facility fuel use limit of 100,000 gallons of diesel fuel oil at 0.05% sulfur by weight based on a twelve-month rolling total. To demonstrate compliance with the fuel restrictions, Crooker shall maintain a record of fuel oil purchases, which shall include receipts indicating the amount of fuel delivered and certification from the supplier indicating the sulfur content of the purchased fuel.

A summary of the BACT analysis for the Portable Diesel is as follows

1. 06-096 CMR 103 regulates PM emission limits, however in keeping with the BPT analysis established in Crooker's previous Air Emission License (A-507-71-E-R) for Diesel #1 PM emissions, the Department determined a more stringent limit of 0.12 lb/MMBtu is appropriate for the Portable Diesel. The PM₁₀ limits are derived from the PM limits.
 2. 06-096 CMR 106 regulates fuel sulfur content, however in keeping with the BPT analysis established in Crooker's A-507-71-E-R for SO₂ emissions, the Department determined a limit of 0.05% sulfur by weight is appropriate.
 3. NO_x, CO, and VOC emission limits are based on previous license limits which were based upon AP-42 data dated 10/96.
 4. Visible emissions from each back-up generator shall each not exceed 20% opacity on a 6-minute block average, except for no more than two 6-minute block averages in a continuous 3-hour period.
- D. Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity, except for no more than five minutes in any one-hour period. Compliance shall be determined by an aggregate of the individual fifteen-second opacity observations, which exceed 20% in any one-hour.
- E. Facility Emissions and Fuel Use Caps

Total fuel use in the diesel unit shall not exceed 100,000 gal/year of diesel fuel, based on a twelve-month rolling total.

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

Pollutant	Tons/Year
PM	0.8
PM ₁₀	0.8
SO ₂	0.4
NO _x	22.4
CO	6.0
VOC	0.7

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III. AMBIENT AIR QUALITY ANALYSIS

According to the *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (last amended December 1, 2005), the level of air quality analyses required for a minor source shall be determined on a case-by case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source. Based on the total facility emissions, Harry Crooker 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-507-71-F-R/A, subject to the following conditions:

Severability: The invalidity or unenforceability of any provision, or part thereof, of this Air Emission License shall not affect the remainder of the provision or any other provisions. This Air Emission 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 (Title 38 MRS §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 06-096 CMR 115. [06-096 CMR 115]

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- (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.
- (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]

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(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:

(i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:

a. 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

b. pursuant to any other requirement of this license to perform stack testing.

(ii) 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

(iii) 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:

(i) 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

(ii) 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

(iii) 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]

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- (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. Crooker shall install and maintain spray nozzles for particulate control on each rock crusher and operate the spray nozzles 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. Crooker 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. Crooker shall maintain a log detailing and quantifying the hours of operation on a daily basis for all of the primary and secondary rock crushers. The operation log shall be kept on-site at the rock crushing location. [06-096 CMR 115, BPT]

- (17) New Source Performance Standards for rock crushers

The primary and secondary rock crushers, are subject to 40 CFR Part 60 Subparts A and OOO and Crooker 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). [40 CFR 60, Subpart OOO]

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(18) The Portable Diesel

A. Total fuel use for the Portable Diesel shall not exceed 100,000 gal/year of diesel fuel, based on a 12 month rolling total, with a maximum sulfur content of 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. Fuel use records shall be maintained on a monthly basis, in addition to the 12-month rolling total. [06-096 CMR 115, BACT]

B. Emissions from the Portable Diesel shall be limited to the following:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
	lb/MMBtu	0.12	-	-	-	-	-
Portable Diesel #2	lb/hr	1.1	1.1	0.4	28.2	7.5	0.9

[06-096 CMR 115, BACT]

C. Visible emissions from the Portable Diesel shall not exceed 20% opacity on a six-minute block average, except for no more than 2 six-minute block averages in a continuous 3-hour period. [06-096 CMR 101]

(19) Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity, except for no more than five minutes in any one-hour period. Compliance shall be determined by an aggregate of the individual fifteen-second opacity observations, which exceed 20% in any one-hour.

(20) Equipment Relocation

A. Crooker shall notify the Bureau of Air Quality, by a written notification at least 48 hours 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. [06-096 CMR 115, BPT]

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- 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. [06-096 CMR 115, BPT]
- (21) Crocker 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 (Title 38 MRSA §605-C).
- (22) Crocker shall keep a copy of this order on site during all periods when the facility is in operation, and have the operator(s) be familiar with the terms of this order. [06-096 CMR 115, BPT]

DONE AND DATED IN AUGUSTA, MAINE THIS 22nd DAY OF February 2012.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Melanie S. [Signature] for
PATRICIA W. AHO, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

The term of this Order shall be for five (5) years from the signature above

Date of initial receipt of application: October 3, 2008

Date of application acceptance: October 22, 2008

Date filed with the Board of Environmental Protection: _____

This Order prepared by Peter G. Carleton, Bureau of Air Quality

