



DEPARTMENT ORDER

Gorham Sand & Gravel, Inc.
York County
Buxton, Maine
A-858-71-G-A

Departmental
Findings of Fact and Order
Air Emission License
Amendment #2

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

Gorham Sand & Gravel, Inc. (GSG) was issued Air Emission License A-858-71-E-R on 11/12/15, for the operation of emission sources associated with their portable crushed stone and gravel facility. The license was subsequently amended on 3/9/20 (A-858-71-F-A).

GSG has requested an amendment to their license in order to add one new, self-powered portable crusher and remove two crushers and their associated engines.

The main office is located at 939 Parker Farm Road, Buxton, Maine.

B. Emission Equipment

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

Rock Crushers

Designation	Powered	Process Rate (tons/hour)	Date of Manufacture	Control Device
RC-5	Diesel	150	2021	(Note 1)
RC-2 (Note 2)	Diesel	507	2002	Spray Nozzles
RC-4 (Note 2)	Diesel	150	1981	Spray Nozzles

Note 1: Water sprays, or other control equipment equally effective to water sprays, or work practices equally effective to water sprays, shall be implemented for particulate matter control on RC-5.

Note 2: Removed from this license

Engines

Unit ID	Max. Capacity (MMBtu/hr)	Max. Firing Rate (gal/hr)	Fuel Type, % sulfur	Date of Manuf.
RC-5 Drive	1.3	9.3	distillate fuel, 0.0015%	2021
RC-2 Drive (Note 1)	0.8	5.6	distillate fuel, 0.0015%	1996
RC-4 Drive (Note 1)	1.5	10.9	distillate fuel, 0.0015%	1981

Note 1: Removed from this license

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;
- 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.

Nonmetallic mineral processing plant means any combination of equipment that is used to crush or grind any nonmetallic mineral wherever located, including lime plants, power plants, steel mills, asphalt concrete plants, portland cement plants (not including concrete batch plants), or any other facility processing nonmetallic minerals.

Portable or Non-Road Engine means an internal combustion engine which is 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. This definition does NOT include engines which remain or will remain at a location (excluding storage locations) for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. A location is any single site at a building, structure, facility, or installation. Any engine that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period.

An engine is not a non-road (portable) engine if it remains or will remain at a location for more than 12 consecutive months or for a shorter period of time if sited at a seasonal source. A seasonal source is a source that remains in a single location for two years or more and which operates for fewer than 12 months in a calendar year. If an engine operates at a seasonal source for one entire season, the engine does not meet the criteria of a non-road (portable) engine and is subject to applicable stationary engine requirements.

Records or Logs 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 Code of Maine Rules (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:

Pollutant	Current License (TPY)	Future License (TPY)	Net Change (TPY)	Significant Emissions Levels
PM	0.5	0.5	0.0	100
PM ₁₀	0.5	0.5	0.0	100
SO ₂	0.1	0.1	0.0	100
NO _x	19.6	19.6	0.0	100
CO	6.0	6.0	0.0	100
VOC	1.6	1.6	0.0	50

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 crusher engines, the facility is licensed as follows:

- As a synthetic minor source of air emissions for NO_x, because GSG is subject to license restrictions that keep facility emissions below major source thresholds for criteria pollutants; and
- As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for HAP.

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. Rock Crusher RC-5

Rock crusher RC-5 is a portable unit which was manufactured in 2021 with a rated capacity of 150 tons/hr. The nonmetallic mineral processing plant also consists of other equipment associated with RC-5, such as screens and belt conveyors.

1. BACT Findings

The regulated pollutant emitted from nonmetallic mineral processing plants is particulate matter. To meet the requirements of BACT for control of particulate matter emissions, GSG shall maintain water sprays or other equally effective control equipment or implement work practices on the nonmetallic mineral processing plant and operate them as needed to control visible emissions.

Visible emissions from rock crusher RC-5 shall be limited to no greater than 10% opacity on a six-minute block average basis. GSG shall install water sprays, utilize other equally effective control equipment, or implement equally effective work practices for particulate control to maintain compliance with the applicable visible emissions limit

Visible emissions from nonmetallic mineral processing plant equipment other than crushers (transfer points on belt conveyors, screening operations, etc.) shall not exceed 20% opacity on a six-minute block average basis.

2. New Source Performance Standards

The federal regulation *Standards of Performance for Nonmetallic Mineral Processing Plants*, 40 C.F.R. Part 60, Subpart OOO, applies to equipment at nonmetallic mineral processing plants with capacities greater than 25 ton/hr for fixed plants and 150 ton/hr for portable plants. The requirements of Subpart OOO apply to any crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, or enclosed truck or railcar loading station at a nonmetallic mineral processing plant greater than the sizes listed above which commenced construction, modification, or reconstruction after August 31, 1983.

Rock crusher RC-5 is part of a nonmetallic mineral processing plant which is physically limited to a maximum capacity of 150 ton/hr or less. Therefore, this equipment is not subject to 40 C.F.R. Part 60, Subpart OOO. [40 C.F.R. § 60.670(c)]

C. RC-5 Drive

RC-5 Drive is a portable engine used to power rock crusher RC-5. RC-5 Drive has a maximum capacity of 1.3 MMBtu/hr, firing distillate fuel. The engine was manufactured in 2021. The fuel fired in RC-5 Drive shall be included in the existing facility-wide fuel limit of 65,000 gallons/year on a 12-month rolling 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.

1. BACT Findings

The BACT emission limits for the RC-5 Drive were based on the following:

- PM, PM₁₀ - 0.12 lb/MMBtu from 06-096 C.M.R. ch. 115, BACT
- SO₂ - 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
- Visible Emissions - 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for RC-5 Drive are the following:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
RC-5 Drive	0.16	0.16	0.01	5.73	1.24	0.46

Visible emissions from RC-5 Drive shall not exceed 20% opacity on a six-minute block average basis.

2. New Source Performance Standards

RC-5 Drive is not subject to *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, 40 C.F.R. Part 60, Subpart III.

The definition in 40 C.F.R. § 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.” The regulation further states at 40 C.F.R. § 1068.30 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 for a shorter period of time if sited at a seasonal source. A seasonal source is a source that remains in a single location for two years or more and which operates for fewer than 12 months in a calendar year. If an engine operates at a seasonal source for one entire season, the engine does not meet the criteria of a non-road engine and is subject to applicable stationary engine requirements. [40 C.F.R. § 60.4200]

RC-5 Drive is considered a non-road engine, as opposed to a stationary engine, since RC-5 Drive is portable and will be moved to various sites.

3. National Emission Standards for Hazardous Air Pollutants

RC-5 Drive is not subject to *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 C.F.R. Part 63, Subpart ZZZZ.

The definition in 40 C.F.R. § 1068.30, as described in the section above, provides the basis for the exemption of this generator from Subpart ZZZZ. [40 C.F.R. § 63.6585] RC-5 Drive is considered a non-road engine, as opposed to a stationary engine, since RC-5 Drive is portable and will be moved to various sites.

D. Annual Emissions

This license amendment will not change the facility's licensed annual emissions.

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-858-71-G-A, subject to the conditions found in Air Emission A-858-71-E-R, in the amendment A-858-71-F-A, and the following conditions.

Severability. 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.

SPECIFIC CONDITIONS

The following replaces Condition (16) of Air Emission License A-858-71-E-R and Condition (16)(A) of Air Emission License Amendment A-858-71-F-A.

(16) Rock Crushers

- A. GSG shall install and maintain spray nozzles for control of particulate matter on Rock Crusher RC-1. [06-096 C.M.R. ch. 115, BACT]
- B. GSG shall install and maintain water sprays for particulate control on rock crusher RC-3 and RC-5, or shall utilize other equally effective control equipment, or shall implement equally effective work practices for particulate control on rock crusher RC-3 and RC-5 to maintain compliance with the applicable visible emissions limit. [06-096 C.M.R. ch. 115, BACT]
- C. If work practices are used to control the particulate emissions from rock crusher RC-3 and RC-5 to maintain compliance with the applicable visible emissions limit, those work practices shall be documented in writing and kept on-site at the rock-crushing station and made available to the Department upon request. [06-096 C.M.R. ch. 115, BACT]
- D. GSG shall maintain records detailing and quantifying the hours of operation on a daily basis for all of the crushers. The operation records shall be kept on-site at the rock crushing location. [06-096 C.M.R. ch. 115, BPT]
- E. Visible emissions from rock crushers RC-1, RC-3, and RC-5 shall be limited to no greater than 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]
- F. Visible emissions from nonmetallic mineral processing plant equipment associated with rock crushers RC-3 and RC-5 such as (transfer points on belt conveyors, screening operations, etc.) shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]
- G. Rock crushers RC-1, RC-3, and RC-5 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 C.M.R. ch. 115, BPT and 40 C.F.R. § 60.670(c)(2)]
- H. NSPS Subpart OOO Requirements

GSG shall comply with all requirements of 40 C.F.R. Part 60, Subpart OOO applicable to rock crusher RC-1 and each associated affected facility including any grinding mill,

screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, and enclosed truck or railcar loading station.

1. Visible emissions from any affected facility other than rock crushers associated with rock crusher RC-1, including transfer points on belt conveyors, portable screens, etc., which commenced construction, modification, or reconstruction before April 22, 2008, shall not exceed 10% opacity on a six-minute block average basis. [40 C.F.R. Part 60, Subpart OOO, Table 3]
2. Visible emissions from any affected facility other than rock crushers associated with rock crusher RC-1, including transfer points on belt conveyors, portable screens, etc., which commenced construction, modification, or reconstruction on or after April 22, 2008, shall not exceed 7% opacity on a six-minute block average basis. [40 C.F.R. Part 60, Subpart OOO, Table 3]
3. GSG shall maintain records detailing the maintenance on particulate matter control equipment including spray nozzles. GSG 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 records. The maintenance records shall be kept on-site at the rock crushing location. [40 C.F.R. §§ 60.674(b) and 60.676(b)(1)]
4. For the rock crushers and ancillary equipment subject to 40 C.F.R. Part 60 Subparts A and OOO, GSG shall comply with the notification and recordkeeping requirements of 40 C.F.R. §§ 60.676 and 60.7, except for § 60.7(a)(2) pursuant to § 60.676(h). [40 C.F.R. §§ 60.676(b), (f), and (i)]

The following replaces Condition (17) of Air Emission License Amendment A-858-71-F-A.

(17) Portable Generators (RC-1 Drive, RC-3 Drive, and RC-5 Drive)

A. Fuel Use

1. Generators RC-1 Drive, RC-3 Drive, and RC-5 Drive are licensed to fire distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015%) sulfur by weight. [06-096 C.M.R. ch. 115, BPT and BACT]
2. Total fuel use for generators RC-1 Drive, RC-3 Drive, and RC-5 Drive combined shall not exceed 65,000 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 and BACT]

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

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
RC-1 Drive	0.22	0.22	0.01	7.94	1.71	0.63
RC-3 Drive	0.01	0.01	0.01	0.20	1.73	0.09
RC-5 Drive	0.16	0.16	0.01	5.73	1.24	0.46

C. Visible Emissions

Visible emissions from generator RC-5 Drive shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

Visible emissions from generators RC-1 Drive and RC-3 Drive shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time GSG 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)]

1. Maintain a log (written or electronic) of the date, time, and duration of all generator startups.
2. Operate the generators 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.

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4. Operate the generators, 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.

DONE AND DATED IN AUGUSTA, MAINE THIS 6th DAY OF OCTOBER, 2021.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:  for
MELANIE LOYZIM, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-858-71-E-R.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 5/3/21

Date of application acceptance: 5/5/21

Date filed with the Board of Environmental Protection:

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

