



DEPARTMENT ORDER

**Ferraiolo Construction, Inc.
 Knox County
 Rockland, Maine
 A-357-71-I-A**

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

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

Ferraiolo Construction, Inc. (Ferraiolo) was issued Air Emission License A-357-71-H-N on April 2, 2013, for the operation of emission sources associated with their concrete batch plant facility located at 262 Pleasant St., Rockland, Maine.

Ferraiolo has requested an amendment to their license in order to replace the existing Boiler #1 with a new unit and add a self-propelled rock crusher.

The main office is located at 262 Pleasant St., Rockland, Maine.

B. Emission Equipment

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

Heating Equipment

Equipment	Max. Capacity (MMBtu/hr)	Fuel Type, % sulfur	Maximum Firing Rate	Date of Manuf.
Boiler #1 *	2.8	distillate fuel, 0.5%	20 gal/hr	2010
Boiler #2	2.1	distillate fuel, 0.0015%	15 gal/hr	2020

* Removed from this license

Rock Crusher

Designation	Powered	Process Rate (tons/hour)	Date of Manufacture	Control Device
Rock Crusher #1	Crusher #1 Engine	300	2011	Spray Nozzles

Engine

Unit ID	Max. Capacity (MMBtu/hr)	Max. Firing Rate (gal/hr)	Fuel Type, % sulfur	Date of Manuf.
Crusher #1 Engine	2.4	17.6	distillate fuel, 0.0015%	2011

Ferraiolo may operate other nonmetallic mineral processing equipment not explicitly listed including grinding mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins, and enclosed truck or railcar loading stations. Requirements for this equipment are included in sections of this license for Nonmetallic Mineral Processing Plants.

Ferraiolo may operate small stationary engines smaller than 0.5 MMBtu/hr. These engines are considered insignificant activities and are not required to be included in this license. However, they are still subject to applicable State and Federal regulations. More information regarding requirements for small stationary engines is available on the Department's website at the link below.

<http://www.maine.gov/dep/air/publications/docs/SmallRICEGuidance.pdf>

Additionally, Ferraiolo may operate portable engines used for maintenance or emergency-only purposes. These engines are considered insignificant activities and are not required to be included in this license. However, they may still be subject to applicable State and Federal regulations.

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	0.06	1.30	1.24	100
PM ₁₀	0.06	1.30	1.24	100
SO ₂	0.35	0.20	-0.15	100
NO _x	0.10	16.50	16.40	100
CO	0.03	3.70	3.67	100
VOC	0.01	1.30	1.29	50*

* Ferraiolo is located in an area of the state included in the Ozone Transport Region. Therefore, the significant emission level for VOC is 50 tpy.

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

E. Facility Classification

With the annual fuel limit on Crusher #1 Engine, the facility is licensed as follows:

- As a synthetic minor source of air emissions for NO_x, because Ferraiolo 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 #1

Rock Crusher #1 is a self-propelled portable crusher made by Atlas Copco. It was manufactured in 2011 with a rated capacity of 300 tons/hr. The nonmetallic mineral processing plant also consists of other equipment associated with Rock Crushers #1 such as screens and belt conveyors.

1. BACT Findings

The regulated pollutant from nonmetallic mineral processing plants is particulate matter. To meet the requirements of BPT for control of particulate matter emissions, Ferraiolo shall maintain water sprays on Rock Crusher #1 and operate as needed to control visible emissions.

Rock Crusher #1 is exempt from the requirements of *Visible Emissions Regulation*, 06-096 C.M.R. ch. 101 because they are subject to a visible emission standard under 40 C.F.R. Part 60, Subpart OOO.

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 #1 is part of a nonmetallic mineral processing plant with a maximum capacity of greater than 150 ton/hr and was manufactured after August 31, 1983. This crusher is therefore affected facility subject to 40 C.F.R. Part 60, Subpart OOO. **Any grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, or enclosed truck or railcar loading station associated with this crusher is also affected facilities subject to 40 C.F.R. Part 60, Subpart OOO.** [40 C.F.R. §§ 60.670(c) and (e)]

a. Notification

Ferraiolo shall submit notification to the Department and EPA of the date of initial startup of every affected facility (as listed above) postmarked within 15 days of the startup. This notification shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available. For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted. For portable units, this notification shall also include both the home office and the current address or location of the portable plant. [40 C.F.R. § 60.676(i)]

b. Standards

Subpart OOO, Table 3 contains applicable visible emission requirements for affected facilities.

Visible emissions from Rock Crusher #1 shall not exceed 12% opacity on a six-minute block average basis. [40 C.F.R. Part 60, Subpart OOO, Table 3]

Visible emissions from any affected facility other than rock crushers, 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]

Visible emissions from any affected facility other than rock crushers, 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]

c. Monitoring Requirements

Ferraiolo shall maintain records detailing the maintenance on particulate matter control equipment including spray nozzles. Ferraiolo 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)]

d. Testing Requirements

Subpart OOO, § 60.675 requires that Ferraiolo conduct an initial performance test for visible emissions from Rock Crusher #1 and from all associated affected facilities subject to Subpart OOO, potentially including **any associated grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, and enclosed truck or railcar loading station.**

Testing shall be completed in accordance with the following:

- (1) An initial performance test shall be completed within 60 days after achieving the maximum production rate at which the unit will be operated, but no later than 180 days after initial startup of the unit. If the initial performance test for a facility falls within a seasonal shutdown, then with approval from the Department, the initial performance test may be postponed until no later than 60 calendar days after resuming operation of the affected equipment. [40 C.F.R. §§ 60.672(b) and 60.675(i)]
- (2) Each performance test shall be done using the methods set forth in 40 C.F.R. Part 60, Subpart OOO, § 60.675. [40 C.F.R. § 60.675(c)]
- (3) Ferraiolo shall submit a test notice to the Department at least seven days prior to conducting a performance test. [40 C.F.R. § 60.675(g)]

Please note, although Ferraiolo may submit notifications and conduct performance testing for multiple affected facilities as a group, any new affected facility subsequently brought on-site to replace or operate in conjunction with an affected facility must also comply with all applicable requirements of 40 C.F.R. Part 60, Subpart OOO including notification and testing requirements.

C. Crusher #1 Engine

Crusher #1 Engine is a portable engine used to power and propel Rock Crusher #1. Crusher #1 Engine has a maximum capacity of 2.4 MMBtu/hr (325 HP), firing distillate fuel. The engine was manufactured in 2011 and is a Caterpillar Engine Model C-9. The fuel fired in Crusher #1 Engine 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 unit is operated.

1. BACT Findings

The BACT emission limits for Crusher #1 Engine are based on the following:

- PM, PM₁₀ - 0.12 lb/MMBtu from 06-096 C.M.R. ch. 115, BPT
- 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. 101

The BACT emission limits for Crusher #1 Engine 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)
Crusher #1 Engine	0.29	0.29	0.01	10.63	2.29	0.84

Visible emissions from Crusher #1 Engine shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time Ferraiolo may comply with the following work practice standards in lieu of the numerical visible emissions standard.

- a. Maintain a log (written or electronic) of the date, time, and duration of all engine startups.
- b. Operate the engine in accordance with the manufacturer's emission-related operating instructions.
- c. 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.

- d. Operate the engine, 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.

2. New Source Performance Standards

Crusher #1 Engine 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]

Crusher #1 Engine is considered a non-road engine, as opposed to a stationary engine, since Crusher #1 Engine is portable and will be moved to various sites with the facility.

3. National Emission Standards for Hazardous Air Pollutants

Crusher #1 Engine 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 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. § 63.6585]

Crusher #1 Engine is considered a non-road engine, as opposed to a stationary engine, since Crusher #1 Engine is portable and will be moved to various sites within the facility.

D. Boiler #2

Boiler #2 has a maximum capacity of 2.1 MMBtu/hr, and fires distillate fuel with maximum sulfur content of 0.0015% by weight. The boiler was manufactured in 2020 and will replace Boiler #1.

Boiler #2 is licensed to fire distillate fuel which, by definition, has a sulfur content of 0.5% or less by weight. Pursuant to 38 M.R.S. § 603-A(2)(A)(3), as of July 1, 2018, no person shall import, distribute, or offer for sale any distillate fuel with a sulfur content greater than 0.0015% by weight (15 ppm). Therefore, the distillate fuel purchased or otherwise obtained for use in Boiler #2 shall not exceed 0.0015% by weight (15 ppm).

1. BACT Findings

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

- PM, PM₁₀ – 0.08 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
- SO₂ – based on firing distillate fuel with a maximum sulfur content of 0.0015% by weight
- NO_x – 20 lb/1000 gal based on AP-42 Table 1.3-1 dated 5/10
- CO – 5 lb/1000 gal based on AP-42 Table 1.3-1 dated 5/10
- VOC – 0.34 lb/1000 gal based on AP-42 Table 1.3-3 dated 5/10
- Visible Emissions – 06-096 C.M.R. ch. 101

The BACT emission limits for Boiler #2 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)
Boiler #2	0.17	0.17	0.01	0.30	0.08	0.01

Visible emissions from Boiler #2 shall not exceed 20% opacity on a six-minute block average basis.

2. New Source Performance Standards

Due to its size, Boiler #2 is not subject to the New Source Performance Standards (NSPS) *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989. [40 C.F.R. § 60.40c]

3. National Emission Standards for Hazardous Air Pollutants

Boiler #2 is subject to *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63, Subpart JJJJJ. The unit is considered a new boiler rated less than 10 MMBtu/hr. [40 C.F.R. §§ 63.11193 and 63.11195]

A summary of the currently applicable requirements of 40 C.F.R. Part 63, Subpart JJJJJ is provided below. Notification forms and additional rule information can be found on the following website:

<https://www.epa.gov/stationary-sources-air-pollution/compliance-industrial-commercial-and-institutional-area-source>.

a. Compliance Dates, Notifications, and Work Practice Requirements

(1) Initial Notification of Compliance

An Initial Notification submittal to EPA is due within 120 days after the source becomes subject to the standard.
[40 C.F.R. § 63.11225(a)(2)]

(2) Boiler Tune-Up Program

(i) A boiler tune-up program shall be implemented.
[40 C.F.R. § 63.11223]

(ii) Each tune-up shall be conducted at a frequency specified by the rule and based on the size, age, and operations of the boiler. See chart below:

Boiler Category	Tune-Up Frequency
Oil fired boilers with a heat input capacity of ≤ 5 MMBtu/hr (Boiler #2)	Every 5 years

[40 C.F.R. § 63.11223(a) and Table 2]

(iii) The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:

1. As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for oil fired boilers less than or equal to 5 MMBtu/hour, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [40 C.F.R. § 63.11223(b)(1)]
 2. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 C.F.R. § 63.11223(b)(2)]
 3. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for oil fired boilers less than or equal to 5 MMBtu/hour, boilers with oxygen trim systems, seasonal boilers, and limited use boilers.
[40 C.F.R. § 63.11223(b)(3)]
 4. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]
 5. Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
[40 C.F.R. § 63.11223(b)(5)]
 6. If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up.
[40 C.F.R. § 63.11223(b)(7)]
- (iv) Tune-Up Report: A tune-up report shall be maintained onsite and submitted to the Department and/or EPA upon request. The report shall contain the following information:
1. The concentration of CO in the effluent stream (ppmv) and oxygen (volume %) measured at high fire or typical operating load both **before** and **after** the boiler tune-up;
 2. A description of any corrective actions taken as part of the tune-up of the boiler; and

3. The types and amounts of fuels used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
[40 C.F.R. § 63.11223(b)(6)]

(3) Compliance Report

A compliance report shall be prepared by March 1st every five years which covers the previous five calendar years. The report shall be maintained by the source and submitted to the Department and/or to the EPA upon request. The report must include the items contained in §§ 63.11225(b)(1) and (2), including the following: [40 C.F.R. § 63.11225(b)]

- (i) Company name and address;
- (ii) A statement of whether the source has complied with all the relevant requirements of this Subpart;
- (iii) A statement certifying truth, accuracy, and completeness of the notification and signed by a responsible official and containing the official's name, title, phone number, email address, and signature;
- (iv) The following certifications, as applicable:
 1. "This facility complies with the requirements in 40 C.F.R. § 63.11223 to conduct tune-ups of each boiler in accordance with the frequency specified in this Subpart."
 2. "No secondary materials that are solid waste were combusted in any affected unit."
 3. "This facility complies with the requirement in §§ 63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available."

b. Recordkeeping

Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart JJJJJ including the following [40 C.F.R. § 63.11225(c)]:

- (1) Copies of notifications and reports with supporting compliance documentation;
- (2) Identification of each boiler, the date of tune-up, procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned;
- (3) Records of the occurrence and duration of each malfunction of each applicable boiler; and
- (4) Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler.

Records shall be in a form suitable and readily available for expeditious review.

E. 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:

- Operating Boiler #2 for 8,760 hr/yr; and
- Firing 50,000 gal/year of distillate fuel in Crusher #1 Engine.

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 ₁₀	SO ₂	NO _x	CO	VOC
Boiler #2	0.8	0.8	0.1	1.4	0.4	0.1
Crusher #1 Engine	0.5	0.5	0.1	15.1	3.3	1.2
Total TPY	1.3	1.3	0.2	16.5	3.7	1.3

Pollutant	Tons/year
Single HAP	9.9
Total HAP	24.9

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

This determination is based on information provided by the applicant regarding the expected construction and operation of the proposed emission units. If the Department determines that any parameter (e.g., stack size, configuration, flow rate, emission rates, nearby structures, etc.) deviates from what was included in the application, the Department may require Ferraiolo to submit additional information and may require an ambient air quality impact analysis at that time.

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-357-71-I-A, subject to the conditions found in Air Emission A-357-71-H-N 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 shall replace Specific Condition (17) of Air Emission License A-357-71-H-N.

(17) Boiler # 2

A. Fuel

1. The facility shall not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm).
[06-096 C.M.R. ch. 115, BACT]
2. Fuel sulfur content compliance shall be demonstrated by fuel delivery receipts from the supplier, certificate of analysis, or testing of the tank containing the fuel to be fired. [06-096 C.M.R. ch. 115, BACT]

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

Unit	PM (lb/hr)	PM₁₀ (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #2	0.17	0.17	0.01	0.30	0.08	0.01

C. Visible emissions from Boiler # shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, 3(A)(2)]

**D. Ferraiolo shall comply with all requirements of 40 C.F.R. Part 63, Subpart JJJJJ applicable to Boiler #2 including, but not limited to, the following:
[incorporated under 06-096 C.M.R. ch. 115, BACT]**

1. An Initial Notification submittal to EPA is due within 120 days after the source becomes subject to the standard. [40 C.F.R. § 63.11225(a)(2)]
2. The facility shall implement a boiler tune-up program.
[40 C.F.R. § 63.11223]

- a. Each tune-up shall be conducted at a frequency specified by the rule and based on the size, age, and operations of the boiler. See chart below:

Boiler Category	Tune-Up Frequency
Oil fired boilers with a heat input capacity of ≤ 5 MMBtu/hr (Boiler #2)	Every 5 years

[40 C.F.R. § 63.11223(a) and Table 2]

- b. The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:

(1) As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for oil fired boilers less than or equal to 5 MMBtu/hour, boilers with oxygen trim systems, seasonal boilers, and limited use boilers.

[40 C.F.R. § 63.11223(b)(1)]

(2) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 C.F.R. § 63.11223(b)(2)]

(3) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for oil fired boilers less than or equal to 5 MMBtu/hour, boilers with oxygen trim systems, seasonal boilers, and limited use boilers.

[40 C.F.R. § 63.11223(b)(3)]

(4) Optimize total emissions of CO, consistent with manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]

(5) Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 C.F.R. § 63.11223(b)(5)]

(6) If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up.

[40 C.F.R. § 63.11223(b)(7)]

c. Tune-Up Report: A tune-up report shall be maintained onsite and submitted to the Department and EPA upon request. The report shall contain the following information:

- (1) The concentration of CO in the effluent stream (ppmv) and oxygen (volume percent) measured at high fire or typical operating load both **before** and **after** the boiler tune-up;
- (2) A description of any corrective actions taken as part of the tune-up of the boiler; and
- (3) The types and amounts of fuels used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.

[40 C.F.R. § 63.11223(b)(6)]

3. Compliance Report

A compliance report shall be prepared by March 1st every five years which covers the previous five calendar years. The report shall be maintained by the source and submitted to the Department and/or to the EPA upon request. The report must include the items contained in §§ 63.11225(b)(1) and (2), including the following:
[40 C.F.R. § 63.11225(b)]

- a. Company name and address;
- b. A statement of whether the source has complied with all the relevant requirements of this Subpart;
- c. A statement certifying truth, accuracy, and completeness of the notification and signed by a responsible official and containing the official's name, title, phone number, email address, and signature;
- d. The following certifications, as applicable:
 - (1) "This facility complies with the requirements in 40 C.F.R. § 63.11223 to conduct tune-ups of each boiler in accordance with the frequency specified in this Subpart."
 - (2) "No secondary materials that are solid waste were combusted in any affected unit."

- (3) “This facility complies with the requirement in §§ 63.11214(d) and 63.11223(g) to minimize the boiler’s time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer’s recommended procedures or procedures specified for a boiler of similar design if manufacturer’s recommended procedures are not available.”
4. Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart JJJJJ including the following [40 C.F.R. § 63.11225(c)]:
- a. Copies of notifications and reports with supporting compliance documentation;
 - b. Identification of each boiler, the date of tune-up, procedures followed for tune-up, and the manufacturer’s specifications to which the boiler was tuned;
 - c. Records of the occurrence and duration of each malfunction of each applicable boiler; and
 - d. Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler.

Records shall be in a form suitable and readily available for expeditious review.
[40 C.F.R. § 63.11225(d)]

The following are new conditions of Air Emission License A-357-71-H-N.

(23) Rock Crusher #1

- A. Ferraiolo shall install and maintain water spray nozzles for control of particulate matter on the nonmetallic mineral processing plant. [06-096 C.M.R. ch. 115, BACT]
- B. Ferraiolo shall maintain records detailing and quantifying the hours of operation on a daily basis for Rock Crusher #1. The operation records shall be kept on-site at the rock crushing location. [06-096 C.M.R. ch. 115, BPT]
- C. NSPS Subpart OOO Requirements

Ferraiolo shall comply with all requirements of 40 C.F.R. Part 60, Subpart OOO applicable to Rock Crusher #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. Ferraiolo shall submit notification to the Department of the date of initial startup of any affected facility postmarked within 15 days of the startup. This notification shall include a description of each affected facility, equipment manufacturer, and

serial number of the equipment, if available. For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted. For portable units, this notification shall also include both the home office and the current address or location of the portable plant. [40 C.F.R. § 60.676(i)]

2. Visible emissions from Rock Crusher #1 shall not exceed 12% opacity on a six-minute block average basis. [40 C.F.R. Part 60, Subpart OOO, Table 3]
3. Visible emissions from any affected facility other than rock crushers, 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]
4. Visible emissions from any affected facility other than rock crushers, 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]
5. Ferraiolo shall maintain records detailing the maintenance on particulate matter control equipment including spray nozzles. Ferraiolo 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)]
6. An initial performance test shall be completed on Rock crusher #1 in accordance with the applicable sections of 40 C.F.R. § 60.675. The performance test shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but no later than 180 days after initial startup of the unit. If the initial performance test for a unit falls within a seasonal shutdown, then with approval from the Department, the initial performance test may be postponed until no later than 60 calendar days after resuming operation of the affected equipment. [40 C.F.R. §§ 60.672(b) and 60.675(i)]
7. An initial performance test shall be completed on any affected facilities operated with a rock crusher subject to 40 C.F.R. Part 60, Subpart OOO in accordance with the applicable sections of 40 C.F.R. § 60.675. This potentially includes each associated grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, and enclosed truck or railcar loading station. The performance test shall be conducted within 60 days after achieving the maximum

production rate at which the unit will be operated, but no later than 180 days after initial startup of the unit. If the initial performance test for a unit falls within a seasonal shutdown, then with approval from the Department, the initial performance test may be postponed until no later than 60 calendar days after resuming operation of the affected equipment.

[40 C.F.R. §§ 60.672(b) and 60.675(i)]

8. Ferraiolo shall submit a test notice to the Department at least seven days prior to conducting a performance test.
[06-096 C.M.R. ch. 115, BPT and 40 C.F.R. § 60.675(g)]
9. For the rock crushers and ancillary equipment subject to 40 C.F.R. Part 60, Subparts A and OOO, Ferraiolo 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)]

(24) **Crusher #1 Engine**

A. Fuel Use

1. Crusher #1 Engine is 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, BACT]
2. Total fuel use for Crusher #1 Engine shall not exceed 50,000 gal/yr of distillate fuel, regardless of where the unit is 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, BACT]

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

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Crusher #1 Engine	0.29	0.29	0.01	10.63	2.29	0.84

C. Visible Emissions

Visible emissions from Crusher #1 Engine shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time Ferraiolo 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 engine startups.
2. Operate the engine 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 engine, 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 16th DAY OF JUNE, 2022.

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-357-71-H-N.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 2/1/22

Date of application acceptance: 2/14/22

Date filed with the Board of Environmental Protection:

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

