

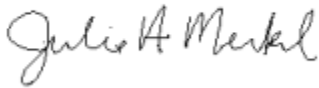
May 25, 2017

Rick McDaniel
Sierra Rock and Dirt, Inc.
P.O. Box 6394
Great Falls, MT 59406

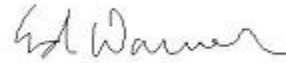
Dear Mr. McDaniel:

Montana Air Quality Permit #3415-02 is deemed final as of May 25, 2017, by the Department of Environmental Quality (Department). This permit is for a portable gravel crushing and screening facility. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,



Julie A. Merkel
Permitting Services Section Supervisor
Air Quality Bureau
(406) 444-3626



Ed Warner
Lead Permitting Engineer
Air Quality Bureau
(406) 444-2467

JM:EW
Enclosure

Montana Department of Environmental Quality
Air, Energy, & Mining Division

Montana Air Quality Permit #3415-02

Sierra Rock and Dirt, Inc.
P.O. Box 6394
Great Falls, MT 59406

May 25, 2017



MONTANA AIR QUALITY PERMIT

Issued To: Sierra Rock and Dirt, Inc.
P.O. Box 6394
Great Falls, MT 59406

MAQP: #3415-02
Administrative Amendment (AA)
Request Received: 5/3/2017
Department Decision on AA: 5/9/2017
Permit Final: 5/25/2017
AFS: #777-3415

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Sierra Rock and Dirt, Inc. (Sierra), pursuant to Sections 75-2-204 and 211, Montana Code Annotated (MCA), as amended, and the Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended, for the following:

Section I: Permitted Facilities

A. Permitted Equipment

Sierra operates a portable crushing/screening facility at various locations throughout Montana. A complete list of the permitted equipment is contained in Section I.A of the Permit Analysis.

B. Current Permit Action

On May 3, 2017, Sierra submitted a de minimis notification in accordance with ARM 17.8.745 to operate a second crusher with a maximum rated throughput capacity of 250 tons per hour and requested that the MAQP be amended to reflect the operation of this second crusher. The Montana Department of Environmental Quality – Air Quality Bureau (Department) concurred that it was a de minimis change in a May 4, 2017 response letter. In addition, Sierra requested an update to the permit condition requiring that they maintain onsite records of daily hours of operation and daily production rates for the last 12 months. The Department’s current practice for this requirement has been to include language that allows for a source to store these records at a location other than the plant site upon approval by the Department. The emissions inventory has also been updated to current Department practices.

Section II: Limitations and Conditions

A. Operational Limitations and Conditions

1. All visible emission from any Standard of Performance for New Stationary Source (NSPS) – affected crusher shall not exhibit an opacity in excess of the following averaged over 6 consecutive minutes (ARM 17.8.340, and 40 CFR 60, Subpart OOO):
 - For crushers that commence construction, modification, or reconstruction on or after April 22, 2008: 12% opacity

- For crushers that commence construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008: 15% opacity
2. All visible emissions from any other NSPS-affected equipment (such as screens and conveyors) shall not exhibit an opacity in excess of the following averaged over six consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO):
 - For equipment that commence construction, modification, or reconstruction on or after April 22, 2008: 7% opacity
 - For crushers that commence construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008: 10% opacity
 3. Sierra shall not cause or authorize to be discharged into the atmosphere, from any non NSPS-affected equipment, any visible emissions that exhibit an opacity of 20% or greater averaged over six consecutive minutes (ARM 17.8.308 and ARM 17.8.752).
 4. Water and water spray bars shall be available on site at all times and operated, as necessary, to maintain compliance with the opacity limitations in Sections II.A.1, II.A.2, and II.A.3 (ARM 17.8.752).
 5. Sierra shall not cause or authorize to be discharged into the atmosphere from any street, road, or parking lot any visible fugitive emissions that exhibit an opacity of 20% or greater averaged over six consecutive minutes and must take reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308 and ARM 17.8.752).
 6. Sierra shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.5 (ARM 17.8.749).
 7. Crushing production from the facility shall be limited to 3,066,000 tons during any rolling 12-month time period (ARM 17.8.749).
 8. Sierra shall not operate more than two crushers at any given time and the combined maximum rated design capacity of the crushers shall not exceed 350 tons per hour (TPH) (ARM 17.8.749).
 9. Screening production from the facility shall be limited to 2,409,000 tons during any rolling 12-month time period (ARM 17.8.749).
 10. Sierra shall not operate more than one screening unit at any given time and the maximum rated design capacity of the screen shall not exceed 275 TPH (ARM 17.8.749).

11. Sierra shall not operate more than two diesel engines/generators at any given time and the combined maximum rated design capacity of the generator engines shall not exceed 585 horsepower (hp) (ARM 17.8.749).
12. If the permitted equipment is used in conjunction with any other equipment owned or operated by Sierra, at the same site, production shall be limited to correspond with an emission level that does not exceed 250 tons of emissions during any rolling 12-month time period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).
13. Sierra shall comply with all applicable standards and limitations, and the reporting, recordkeeping, testing, and notification requirements contained in 40 CFR 60, Subpart OOO for the crushing/screening operation and associated equipment (ARM 17.8.340 and 40 CFR 60, Subpart OOO).
14. Sierra shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* and 40 CFR 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, for any applicable diesel engine (ARM 17.8.340; 40 CFR 60, Subpart IIII; ARM 17.8.342 and 40 CFR 63, Subpart ZZZZ).

B. Testing Requirements

1. Within 60 days after achieving the maximum production rate, but no later than 180 days after initial startup, an Environmental Protection Agency (EPA) Method 9 opacity test and/or other methods and procedures, as specified in 40 CFR Part 60.675, must be performed on any NSPS-affected equipment to demonstrate compliance with the emissions limitations contained in Sections II.A.1 and II.A.2 (ARM 17.8.340 and 40 CFR 60, Subpart A and Subpart OOO).
2. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
3. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. If this portable crushing/screening plant is moved to another location, an Intent to Transfer Form must be sent to the Department. In addition, a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The Intent to Transfer Form and the proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.765).

2. Sierra shall maintain records showing daily hours of operation and daily production rates for the last 12 months. The records compiled in accordance with this permit shall be maintained by Sierra as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request. These records may be stored at a location other than the plant site upon approval by the Department (ARM 17.8.749).
3. Sierra shall supply the Department with annual production information for all emission points, as required, by the Department in the annual Emission Inventory request. The request will include, but is not limited to, all sources of emissions identified in the most recent emission inventory report and sources identified in Section I.A of the Permit Analysis.

Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in units as required by the Department. This information may be used for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

4. Sierra shall notify the Department of any construction or improvement project conducted, pursuant to ARM 17.8.745, that would include a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit. The notice must be submitted to the Department, in writing, 10 days prior to start-up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).
5. Sierra shall document, by month, the crushing production from the facility. By the 25th day of each month, Sierra shall calculate the crushing production from the facility for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.7. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
6. Sierra shall document, by month, the total combined screening production from the facility. By the 25th day of each month, Sierra shall calculate the total combined screening production from the facility for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.9. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

Section III: General Conditions

- A. Inspection – Sierra shall allow the Department’s representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if Sierra fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Sierra of the responsibility for complying with any applicable federal or Montana statute, rule or standard, except as specifically provided in ARM 17.8.740, *et seq.* (ARM 17.8.756).
- D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement as specified in Section 75-2-401 *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by the Department’s decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department’s decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department’s decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department’s decision on the application is final 16 days after the Department’s decision is made.
- F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by Department personnel at the location of the permitted source.
- G. Permit Fees – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by Sierra may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Construction Commencement – Construction must begin within three years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked (ARM 17.8.762).
- I. The Department may modify the conditions of this permit based on local conditions of any future site. These factors may include, but are not limited to, local terrain, meteorological conditions, proximity to residences, etc.

- J. Sierra shall comply with the conditions contained in this permit while operating at any location in Montana, except within those areas having a Department-approved permitting program.

Montana Air Quality Permit (MAQP) Analysis
Sierra Rock and Dirt, Inc.
MAQP #3415-02

I. Introduction/Process Description

A. Permitted Equipment

Sierra Rock and Dirt, Inc. (Sierra) owns and operates a portable crushing/screening facility consisting of a portable 1998 Kolberg/Pioneer crusher (up to 100 tons per hour (TPH)), a crusher rated up to 250 TPH, a 2004 Kolberg/Pioneer screen (up to 275 TPH), two a diesel generator engines with a combined rated design capacity not to exceed 585 horsepower (hp), and associated equipment. MAQP #3415-02 is written de minimis-friendly to provide operational flexibility so that alternate equipment may be utilized as long as maximum capacities are not exceeded and permit conditions are met.

The Sierra facility operates at various locations throughout Montana. MAQP #3415-02 applies to the source while operating at any location in Montana, except within those areas having a Department of Environmental Quality (Department) approved permitting program, those areas considered tribal lands, or those areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* Sierra will be required to obtain an addendum to this air quality permit to operate at locations in or within 10 km of certain PM₁₀ nonattainment areas.

B. Source Description

Sierra operates a crushing/screening plant and associated equipment to crush sand and gravel materials for use in various construction operations. Sierra also uses the facility to recycle asphalt. For a typical operational setup, materials are loaded into the crushing/screening plant by a feeder, transferred by conveyor, and passed through the crusher. Materials are crushed by the crusher and sent to the screen. Materials are screened, separated, and sent to stockpile for sale and use in construction operations.

C. Permit History

On December 7, 2005, the Department issued MAQP #3415-00 to Sierra for the operation of a portable crushing/screening facility. The permit allowed Sierra to operate two crushers, two generators/engines, and associated equipment.

The Department revoked MAQP #3415-00 after Sierra failed to pay its 2015 annual operating permit fee by the established deadline. On September 6, 2016, the Department received the final payment from Sierra for the 2015 annual air quality operating fee (including penalty and interest). In accordance with Montana Code Annotated (MCA) 75-2-220(5), the Department is reissuing the revoked permit with updates to potentially applicable rule references and permit language.

The permit condition regarding the diesel generator engines was changed from referencing kilowatts (kW) to horsepower (hp) and the emission inventory corrected to reflect the appropriate allowable emission levels from the diesel engines. **MAQP #3415-01** replaced MAQP #3415-00.

D. Current Permit Action

On May 3, 2017, Sierra submitted a de minimis notification in accordance with Administrative Rules of Montana (ARM) 17.8.745 to operate a second crusher with a maximum rated throughput capacity of 250 tons per hour and requested that the MAQP be amended to reflect the operation of this second crusher. The Department concurred that it was a de minimis change in a May 4, 2017 response letter. In addition, Sierra requested an update to the permit condition requiring that they maintain onsite records of daily hours of operation and daily production rates for the last 12 months. The Department's current practice for this requirement has been to include language that allows for a source to store these records at a location other than the plant site upon approval by the Department. The emissions inventory has also been updated to current Department practices. **MAQP #3415-02** replaces MAQP #3415-01.

E. Additional Information

Additional information, such as applicable rules and regulations, Best Available Control Technology (BACT)/Reasonably Available Control Technology (RACT) determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each change to the permit.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department. Upon request, the Department will provide references for locations of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1 - General Provisions, including, but not limited to:

1. ARM 17.8.101 Definitions. This rule is a list of applicable definitions used in this subchapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.
3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source, or other entity as required by any rule in this chapter, or any permit or order

issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

Sierra shall comply with all requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.
5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner that a public nuisance is created.

B. ARM 17.8, Subchapter 2 - Ambient Air Quality, including, but not limited to:

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀
11. ARM 17.8.230 Fluoride in Forage

Sierra must comply with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 - Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter (PM). (2) Under this rule, Sierra shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne PM.

3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause or authorize to be discharged into the atmosphere PM caused by the combustion of fuel in excess of the amount determined by this rule.
4. ARM 17.8.310 Particulate Matter, Industrial Processes. This rule requires that no person shall cause or allow to be discharged into the atmosphere PM in excess of the amount set forth in this rule.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this rule.
6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank truck or trailer is equipped with a vapor loss control device as described in (1) of this rule.
7. ARM 17.8.340 Standards of Performance for New Stationary Sources. This rule incorporates, by reference, 40 Code of Federal Regulations (CFR) 60, Standards of Performance for New Stationary Sources (NSPS). Sierra is considered an NSPS affected facility under 40 CFR Part 60 and is subject to the requirements of the following subparts.
 - a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to an NSPS Subpart as listed below:
 - b. 40 CFR 60, Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants. In order for a crushing plant to be subject to this subpart, the facility must meet the definition of an affected facility and, the affected equipment must have been constructed, reconstructed, or modified after August 31, 1983. Based on the information submitted by Sierra, the portable crushing equipment to be used under MAQP # 3415-02 is subject to this subpart because it has the capacity to process more than 150 tons per hour of nonmetallic minerals.
 - c. 40 CFR 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE). Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006, and are not fire pump engines, and owners and operators of stationary CI ICE that modify or reconstruct their stationary CI ICE after July 11, 2005, are subject to this subpart. Based on the information submitted by Sierra, the CI ICE to be used under MAQP #3415-02 is a non-road CI ICE associated with a portable facility and therefore may not be subject to this regulation for stationary CI ICE. However, a non-road engine would become regulated as a stationary 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. Therefore, this subpart would become applicable if Sierra operated the CI ICE at a single location for more than 12 months or a shorter period of time for an engine located at a seasonal source.

8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. This rule incorporates, by reference, 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories. This facility is may be considered a NESHAP-affected source because some of the equipment could meet the definition of any NESHAPs Subpart defined in 40 CFR Part 63.
 - a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to a NESHAPs Subpart as listed below.
 - b. 40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants (HAPs) for Stationary Reciprocating Internal Combustion Engines (RICE). An owner or operator of a stationary RICE at a major or area source of HAP emissions is subject to this rule except if the stationary RICE is being tested at a stationary RICE test cell/stand. An area source of HAP emissions is a source that is not a major source. Based on the information submitted by Sierra, the RICE to be used under MAQP #3415-02 is a non-road RICE associated with a portable facility and therefore may not be subject to this regulation for stationary RICE. However, a non-road engine would become regulated as a stationary 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. Therefore, this subpart would become applicable if Sierra operated the RICE at a single location for more than 12 months or a shorter period of time for an engine located at a seasonal source.

D. ARM 17.8, Subchapter 5 - Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that Sierra submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. The current action is considered an administrative permit action and does not require a permit application fee.
2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an Open Burning Permit, issued by the Department. This operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that pro-rate the required fee amount.

- E. ARM 17.8, Subchapter 7 - Permit, Construction, and Operation of Air Contaminant Sources, including, but not limited to:
1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
 2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a facility to obtain an air quality permit or permit modification to construct, modify, or use any asphalt plant, crusher, or screen that has the Potential to Emit (PTE) greater than 15 tons per year of any pollutant. Sierra has a PTE greater than 15 tons per year of total PM, oxides of nitrogen (NO_x), and carbon monoxide (CO); therefore, an air quality permit is required.
 3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the MAQP Program.
 4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the MAQP Program.
 5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Neither a permit application nor a public notice were required for this permit action because the permit action is considered an administrative amendment.
 6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
 7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that Best Available Control Technology (BACT) shall be utilized. See Section IV of this permit analysis.

8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving Sierra of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or modified source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.
12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of Sierra, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
14. ARM 17.8.765 Transfer of Permit. (1) This rule states that an air quality permit may be transferred from one location to another if the Department receives a complete notice of Intent to Transfer location, the facility will operate in the new location for less than 1 year, the facility will comply with the FCAA and the Clean Air Act of Montana, and the facility complies with other applicable rules. (2) This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

- F. ARM 17.8, Subchapter 8 - Prevention of Significant Deterioration of Air Quality, including, but not limited to:
1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
 2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications-Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source because it is not a listed source and does not have a PTE greater than 250 tons per year (excluding fugitive emissions) of any air pollutant.

- G. ARM 17.8, Subchapter 12 - Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any stationary source having:
 - a. PTE > 100 tons/year of any pollutant.
 - b. PTE > 10 tons/year of any one Hazardous Air Pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule.
 - c. PTE > 70 tons/year of PM₁₀ in a serious PM₁₀ nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (1) Title V of the FCAA Amendments of 1990 requires that all sources, as defined in ARM 17.8.1204 (1), obtain a Title V Operating Permit. In reviewing and issuing MAQP #3415-02 for the Sierra facility, the following conclusions were made:
 - a. The facility's PTE is less than 100 tons/year for any pollutant.
 - b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year of all HAPs.
 - c. This source is not located in a serious PM₁₀ nonattainment area.
 - d. The facility is currently subject to NSPS (40 CFR 60, Subpart A - General Provisions and Subpart OOO - Non-Metallic Mineral Processing Plants, and potentially Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines).

- e. This facility is potentially subject to a current NESHAP (40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines).
- f. This source is not a Title IV affected source, nor a solid waste combustion unit.
- g. This source is not an EPA designated Title V source.

Based on these facts, the Department has determined that Sierra will be a minor source of emissions as defined under Title V. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit, Sierra will be required to obtain a Title V Operating Permit.

III. BACT Determination

A BACT determination is required for each new or modified source. Sierra shall install on the new or modified source the maximum air pollution control capability which is technologically practicable and economically feasible, except that BACT shall be utilized.

A BACT determination is not required for the current permit action because the permit change is considered an administrative permit change.

IV. Emission Inventory

| Emission Source | TPY | | | | | | |
|-------------------------------------|--------------|------------------|-------------------|-----------------|--------------|-------------|-----------------|
| | PM | PM ₁₀ | PM _{2.5} | NO _x | CO | VOC | SO ₂ |
| Cold Aggregate Storage Piles | 2.53 | 1.20 | 0.18 | -- | -- | -- | -- |
| Cold Aggregate Handling/Conveyors | 1.29 | 0.42 | 0.12 | -- | -- | -- | -- |
| Cold Aggregate Screens | 2.65 | 0.89 | 0.06 | -- | -- | -- | -- |
| Crushers | 3.68 | 0.83 | 0.15 | -- | -- | -- | -- |
| Haul Roads / Vehicle Traffic | 5.68 | 1.57 | 0.16 | -- | -- | -- | -- |
| Diesel Engine(s): 585 hp @ 8760 hrs | 5.64 | 5.64 | 5.64 | 79.43 | 17.12 | 6.44 | 5.25 |
| Total Emissions | 21.47 | 10.54 | 6.31 | 79.43 | 17.12 | 6.44 | 5.25 |

Notes:

2409000 TPY in screening based on 275 TPH combined capacity @ 8760 hrs/yr
 3066000 TPY in crushing based on 350 TPH combined capacity @ 8760 hrs/yr
 8760 hrs/yr for generators based on 585 hp capacity

CO = carbon monoxide

hp = horsepower

lb = pound

NO_x = oxides of nitrogen

PM = particulate matter

PM₁₀ = particulate matter with an aerodynamic diameter of 10 microns or less

PM_{2.5} = particulate matter with an aerodynamic diameter of 2.5 microns or less

SO₂ = sulfur dioxide

TPH = tons per hour

TPY = tons per year

VOC = volatile organic compounds

yr = year

Cold Aggregate Storage Piles

Maximum Process Rate = 350 ton/hr (Highest process rate)

Maximum Hours of Operation = 8,760 hrs/yr

Number of Piles = 1 piles (for simplicity, assume max production rate to a single pile)

Filterable PM Emissions:

Predictive equation for emission factor provided per AP 42, Sec. 13.2.4.3, 11/06.

Emission Factor = $k (0.0032) * (U/5)^{1.3} * (M / 2)^{-1.4} = 0.00331 \text{ lb/ton}$

Where: k = particle size multiplier = 0.74 (Value for PM < 30 microns per AP 42, Sec. 13.2.4.3, 11/06)

U = mean wind speed = 10 mph (Estimate based on values provided in AP 42, Sec. 13.2.4.3, 11/06)

M = material moisture content = 3% (Estimate based on values provided in AP 42, Sec. 13.2.4.3, 11/06)

Control Efficiency = 50% (Water or chemical spray)

Calculation: $(350 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00331 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ piles}) = 5.07 \text{ ton/yr}$

Calculation: $(350 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00331 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ piles}) * (1 - 50/100) = 2.53 \text{ ton/yr}$

Filterable PM₁₀ Emissions:

Predictive equation for emission factor provided per AP 42, Sec. 13.2.4.3, 11/06.

Emission Factor = $k (0.0032) * (U/5)^{1.3} * (M / 2)^{-1.4} = 0.00156 \text{ lb/ton}$

Where: k = particle size multiplier = 0.35 (Value for PM < 10 microns per AP 42, Sec. 13.2.4.3, 11/06)

U = mean wind speed = 10 mph (Estimate based on values provided in AP 42, Sec. 13.2.4.3, 11/06)

M = material moisture content = 3% (Estimate based on values provided in AP 42, Sec. 13.2.4.3, 11/06)

Control Efficiency = 50% (Water or chemical spray)

Calculation: $(350 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00156 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ piles}) = 2.40 \text{ ton/yr}$

Calculation: $(350 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00156 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ piles}) * (1 - 50/100) = 1.20 \text{ ton/yr}$

Filterable PM_{2.5} Emissions:

Predictive equation for emission factor provided per AP 42, Sec. 13.2.4.3, 11/06.

Emission Factor = $k (0.0032) * (U/5)^{1.3} * (M / 2)^{-1.4} = 0.00024 \text{ lb/ton}$

Where: k = particle size multiplier = 0.053 (Value for PM < 2.5 microns per AP 42, Sec. 13.2.4.3, 11/06)

U = mean wind speed = 10 mph (Estimate based on values provided in AP 42, Sec. 13.2.4.3, 11/06)

M = material moisture content = 3% (Estimate based on values provided in AP 42, Sec. 13.2.4.3, 11/06)

Control Efficiency = 50% (Water or chemical spray)

Calculation: $(350 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00024 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ piles}) = 0.36 \text{ ton/yr}$

Calculation: $(350 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00024 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ piles}) * (1 - 50/100) = 0.18 \text{ ton/yr}$

Conveyor Transfer Point Crushing/Screening

Maximum Process Rate = 350 ton/hr (Highest process rate)

Maximum Hours of Operation = 8,760 hrs/yr

Number of Transfers = 6 transfer (estimated)

Filterable PM Emissions:

Emission Factor = 0.00014 lb/ton (0.0030 uncontrolled, 0.00014 controlled, AP 42, Table 11.19.2-2, 8/04)

Control Efficiency = 0% (built into emission factor)

Calculation: $(350 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00014 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (6 \text{ transfer}) = 1.29 \text{ ton/yr}$

Filterable PM₁₀ Emissions:

Emission Factor = 0.000046 lb/ton (0.00110 uncontrolled, 0.000046 controlled, AP 42, Table 11.19.2-2, 8/04)

Control Efficiency = 0% (built into emission factor)

Calculation: $(350 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.000046 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (6 \text{ transfer}) = 0.42 \text{ ton/yr}$

Filterable PM_{2.5} Emissions:

Emission Factor = 0.000013 lb/ton (0.000013 controlled, AP 42, Table 11.19.2-2, 8/04)

Control Efficiency = 0% (built into emission factor)

Calculation: $(350 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.000013 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (6 \text{ transfer}) = 0.12 \text{ ton/yr}$

Screening

Maximum Process Rate = 275 ton/hr (Maximum process rate)

Maximum Hours of Operation = 8,760 hrs/yr

Number of Screens = 1 screen(s)

Total PM Emissions:

Emission Factor = 0.0022 lb/ton (0.025 uncontrolled, 0.0022 controlled, AP 42, Table 11.19.2-2, 8/04)

Control Efficiency = 0%

Calculation: $(275 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.0022 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ screen(s)}) = 2.65 \text{ ton/yr}$

Total PM₁₀ Emissions:

Emission Factor = 0.00074 lb/ton (0.0087 uncontrolled, 0.00074 controlled, AP 42, Table 11.19.2-2, 8/04)

Control Efficiency = 0%

Calculation: $(275 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00074 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ screen(s)}) = 0.89 \text{ ton/yr}$

Total PM_{2.5} Emissions:

Emission Factor = 0.00005 lb/ton (0.000050 controlled, AP 42, Table 11.19.2-2, 8/04)

Control Efficiency = 0% (built into emission factor)

Calculation: $(275 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00005 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ screen(s)}) = 0.06 \text{ ton/yr}$

Crushing

Maximum Process Rate = 350 ton/hr (Maximum process rate)

Maximum Hours of Operation = 8,760 hrs/yr

PM Emissions:

Emission Factor = 0.0024 lb/ton (tertiary crushing (controlled), AP 42, Table 11.19.2-2, 8/04)

Control Efficiency = 0% (built into emission factor)

Calculation: $(350 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.0024 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 3.68 \text{ ton/yr}$

PM₁₀ Emissions:

Based on AP-42

Emission Factor = 0.00054 lb/ton (tertiary crushing (controlled), AP 42, Table 11.19.2-2, 8/04)

Control Efficiency = 0% (built into emission factor)

Calculation: $(350 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00054 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.83 \text{ ton/yr}$

PM_{2.5} Emissions:

Emission Factor = 0.0001 lb/ton (tertiary crushing (controlled), AP 42, Table 11.19.2-2, 8/04)

Control Efficiency = 0% (built into emission factor)

Calculation: $(350 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.0001 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.15 \text{ ton/yr}$

Diesel Engine(s): 585 hp

Note: Emissions are based on the power output of the engines (585 hp).

Operational Capacity of Engines = 585 hp

Hours of Operation = 8,760 hours

Total PM/PM₁₀/PM_{2.5} Emissions:

Emission Factor = 0.0022 lbs/hp-hr (All PM < 1 mm, AP-42, Sec. 3.3, Table 3.3-1, 10/96)

Calculation: $(8,760 \text{ hours}) * (585 \text{ hp}) * (0.0022 \text{ lbs/hp-hr}) * (\text{ton}/2000 \text{ lb}) = 5.64 \text{ ton/yr}$

NOx Emissions:

Emission Factor = 0.031 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)
 Calculation: (8,760 hours) * (585 hp) * (0.031 lbs/hp-hr) * (ton/2000 lb) = 79.43 ton/yr

CO Emissions:
 Emission Factor = 0.00668 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)
 Calculation: (8,760 hours) * (585 hp) * (0.00668 lbs/hp-hr) * (ton/2000 lb) = 17.12 ton/yr

VOC Emissions:
 Emission Factor = 0.0025141 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, TOC, Exhaust & Crankcase, 10/96)
 Calculation: (8,760 hours) * (585 hp) * (0.0025141 lbs/hp-hr) * (ton/2000 lb) = 6.44 ton/yr

SO₂ Emissions:
 Emission Factor = 0.00205 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)
 Calculation: (8,760 hours) * (585 hp) * (0.00205 lbs/hp-hr) * (ton/2000 lb) = 5.25 ton/yr

V. Existing Air Quality

MAQP #3415-02 is issued for the operation of a portable crushing/screening facility to operate at various locations throughout Montana. This facility would be allowed to operate at any area designated as attainment or unclassified for all National Ambient Air Quality Standards (NAAQS); excluding those counties that have a Department-approved permitting program, those areas considered tribal lands, or those areas in or within 10 km of certain PM₁₀ nonattainment areas. *A Missoula County air quality permit would be required for locations within Missoula County, Montana.* Sierra will be required to obtain an addendum to this air quality permit to operate at locations in or within 10 km of certain PM₁₀ nonattainment areas.

VI. Air Quality Impacts

The Department determined that there will be no impacts from this permitting action because this permitting action is considered an administrative action. Therefore, the Department believes this action will not cause or contribute to a violation of any ambient air quality standard.

VII. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, the Department conducted the following private property taking and damaging assessment.

| YES | NO | |
|-----|----|---|
| | | 1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights? |
| | X | 2. Does the action result in either a permanent or indefinite physical occupation of private property? |
| | X | 3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property) |
| | X | 4. Does the action deprive the owner of all economically viable uses of the property? |
| | X | 5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)]. |

| YES | NO | |
|-----|----|---|
| | X | 5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests? |
| | X | 5b. Is the government requirement roughly proportional to the impact of the proposed use of the property? |
| | X | 6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action) |
| | X | 7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally? |
| | X | 7a. Is the impact of government action direct, peculiar, and significant? |
| | X | 7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded? |
| | X | 7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question? |
| | X | Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas) |

Based on this analysis, the Department determined that there are no taking or damaging implications associated with this permit action.

VIII. Environmental Assessment

This permitting action will not result in an increase of emissions from the facility and is considered an administrative action; therefore, an environmental assessment is not required.

Analysis Prepared By: Ed Warner

Date: May 8, 2017