Montana Department of
ENVIRONMENTAL QUALITY
Brian Schweitzer, Governor
P. O. Box 200901 Helena, MT 59620-0901 (406) 444-2544 Website: www.deq.mt.gov

November 30, 2012

Brandon Lerbakken
JMAC Resources, Inc.
5009 139th Ave. NW
Williston, ND 58801

Dear Mr. Lerbakken:

Montana Air Quality Permit #4814-00 is deemed final as of November 30, 2012, by the Department of Environmental Quality (Department). This permit is for a portable non-metallic mineral crushing and screening plant (identified as CO-2). 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 Merkel
Air Permitting Supervisor
Air Resources Management Bureau
(406) 444-3626

Deanne Fischer, P.E.
Environmental Engineer
Air Resources Management Bureau
(406) 444-3403

JM:DF
Enclosure

Montana Department of Environmental Quality
Permitting and Compliance Division

Montana Air Quality Permit #4814-00

JMAC Resources, Inc.
5009 139th Ave. NW
Williston, ND 58801

November 30, 2012

MONTANA AIR QUALITY PERMIT

Issued To: JMAC Resources, Inc.
5009 139th Ave. NW
Williston, ND 58801

MAQP: #4814-00
Application Complete: 10/26/2012
Preliminary Determination Issued: 10/29/2012
Department's Decision Issued: 11/14/2012
Permit Final: 11/30/2012
AFS #:777-4814

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

SECTION I: Permitted Facilities

A. Permitted Equipment

JMAC proposes to operate a portable non-metallic mineral crushing and screening plant (identified as CO-2), wash plant, and associated equipment. A complete list of permitted equipment is contained in Section I.A of the permit analysis.

B. Plant Location

The initial location of the proposed portable crushing and screening operation is Section 34, Township 27 North, Range 56 East in Richland County, Montana. However, MAQP #4814-00 applies while operating at any location in Montana, except those areas having a Montana Department of Environmental Quality (Department)-approved permitting program, areas considered tribal lands, or areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana*. An addendum would be required for locations in or within 10 km of certain PM_{10} nonattainment areas.

SECTION II: Conditions and Limitations

A. Emission Limitations

1. All visible emissions from any Standards of Performance for New Stationary Source (NSPS) – affected crusher shall not exhibit an opacity in excess of the following averaged over six consecutive minutes (ARM 17.8.340 and 40 Code of Federal Regulations (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 equipment that commence construction, modification, or reconstruction after August 31, 1983, but before April 22, 2008: 10% opacity

3. All visible emissions from any non-NSPS affected equipment shall not exhibit an opacity of 20% or greater averaged over six consecutive minutes (ARM 17.8.304).

4. Water and 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 17.8.749 and ARM 17.8.752).

5. JMAC shall not cause or authorize the use of any street, road or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).

6. JMAC shall treat all unpaved portions of the haul roads, access roads, parking lots, or the 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. JMAC shall not operate more than three crushers at any given time and the total combined maximum rated design capacity of the crushers shall not exceed 1,500 tons per hour (TPH) (ARM 17.8.749).

8. JMAC shall not operate more than two screens at any given time and the total combined maximum rated design capacity of the screens shall not exceed 1,000 TPH (ARM 17.8.749).

9. JMAC shall not operate or have on-site more than two diesel-fired engines/generators at any given time (ARM 17.8.749):

    a. The maximum rated design capacity of the primary diesel-fired generator engine shall not exceed 973 brake-horsepower (bhp) and the engine shall be compliant with the Environmental Protection Agency's (EPA) non-road compression-ignition engine Tier 2 or higher, emission standards pursuant to 40 CFR Part 89.112.

    b. The maximum rated design capacity of the secondary diesel-fired generator engine shall not exceed 470 bhp and the engine shall be compliant with EPA's non-road compression-ignition engine Tier 3 or higher, emission standards pursuant to 40 CFR Part 89.112.

10. If the permitted equipment is used in conjunction with any other equipment owned or operated by JMAC, at the same site, production shall be limited to correspond with an emission level that does not exceed 250 tons during any rolling 12-month period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).

11. JMAC shall comply with all applicable standards and limitations, monitoring, reporting, recordkeeping, testing, and notification requirements contained in 40 CFR 60, Subpart OOO, *Standards of Performance for Nonmetallic Mineral Processing Plants* (ARM 17.8.340 and 40 CFR 60, Subpart OOO).

12. JMAC 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 maximum production, but no later than 180 days after initial start-up, 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 all NSPS-affected equipment to demonstrate compliance with the emission limitations contained in Section II.A.1 and II.A.2. Additional testing may be required. (ARM 17.8.340 and 40 CFR 60, 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 crushing and screening plant is moved to another location, an Intent to Transfer form must be sent to the Department and 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 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 17.8.749 and ARM 17.8.765).

2. JMAC 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 not be limited to, all sources of emissions identified in the emission inventory contained in 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 the units required by the Department. This information may be used for calculating operating fees, and/or to verify compliance with permit limitations (ARM 17.8.505).

3. JMAC shall notify the Department of any construction or improvement project conducted, pursuant to ARM 17.8.745, that would include ***the addition of a new emissions unit***, 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. The notice must be submitted to the Department, in writing, 10 days prior to startup 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(l)(d) (ARM 17.8.745).

4. JMAC shall maintain on-site 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 JMAC as a permanent business record for at least five 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 (ARM 17.8.749).

D. Notification

JMAC shall provide the Department with written notification of the actual start-up date of the JMAC's crushing and screening operation postmarked within 15 days after the actual start-up date (ARM 17.8.749).

SECTION III: General Conditions

A. Inspection – JMAC 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 (continuous emissions monitoring system (CEMS) or continuous emissions rate monitoring system (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 JMAC fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving JMAC of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided for 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), Montana Code Annotated (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. Air Quality Operation Fees – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by JMAC may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.

H. Duration of Permit – Construction or installation must begin or contractual obligations entered into that would constitute substantial loss within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (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. JMAC shall comply with the conditions contained in this permit while operating in any location in Montana, except within those areas that have a Department-approved permitting program or areas considered tribal lands.

Montana Air Quality Permit (MAQP) Analysis
JMAC Resources, Inc.
CO-2
MAQP #4814-00

I. Introduction/Process Description

JMAC Resources, Inc. (JMAC) owns and operates a portable non-metallic mineral processing plant, wash plant, and associated equipment with a maximum rated design capacity of 1,500 tons per hour (TPH) crushing production and 1,000 TPH screening production. The facility employs two diesel-fired engine/generator sets to provide electrical power to equipment.

A. Permitted Equipment

The following list of permitted equipment is based on information provided in the application submitted by JMAC. MAQP #4814-00 is written de minimis friendly and operational flexibility is provided so that alternate equipment may be utilized as long as maximum capacities are not exceeded and permit conditions are met. See Section II of the MAQP for specific equipment limitations and/or conditions. Equipment permitted under this action consists of the following:

- 1976 Telesmith 3042 Jaw Crusher with VGF [500 TPH]
- 2011 MVP 350 Cone Crusher [500 TPH]
- Impact Crusher [500 TPH]
- (2) 2010 CedarRapids Twin 3620 Deck Screen [500 TPH]
- Fab Tec 6203 Wash Plant [300 TPH]
- 2010 MTU/Detroit 573RSL4035 973 bhp Diesel-fired engine/generator [Tier 2]
- 2009 John-Deere 470 bhp Diesel-fired engine/generator [Tier 3]
- Associated Material Handling Equipment; feeder, conveyors (including integrated equipment conveyors), stackers, aggregate piles, etc.

B. Source Description

JMAC proposes to use this crushing and screening plant (CO-2) and associated equipment to crush sand, gravel, and scoria materials for use in various construction operations. For a typical operational setup, materials are fed into the crushing and screening plant by a feeder, transferred by conveyor, and passed through the closed-loop processing equipment. Materials are either crushed or screened and sent to stockpiles via conveyors and stockpiled with stackers. A wash plant will be set up with or without the crushing and screening plant and powered by a separate generator. Material will be fed to the wash plant by a feeder, washed and screened material will be conveyed to stockpiles. Materials are screened, washed, separated, and stockpiled for sale and use in construction operations.

JMAC is based out of North Dakota, however the initial location proposed for this facility, shall serve as the plant's designated home pit while operating in Montana. The initial location proposed is located approximately 8 miles south of Culbertson, MT on State Highway 16 in Section 34, Township 27 North, Range 56 East in Richland County, Montana.

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 of Environmental Quality (Department). Upon request, the Department will provide references for locations of complete copies of all applicable rules and regulations where appropriate.

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

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, 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).

   JMAC shall comply with the 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 that, without resulting in reduction of 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 as to create a public nuisance.

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 PM_{10}

JMAC must maintain compliance 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 are taken to control emissions of airborne particulate matter (PM). (2) Under this rule, JMAC shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.

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 particulate matter caused by the combustion of fuel in excess of the amount determined by this section.

4. ARM 17.8.310 Particulate Matter, Industrial Processes. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter in excess of the amount set forth in this section.

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 section.

6. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). JMAC 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 JMAC, the portable crushing equipment to be used under MAQP #4814-00 is subject to this subpart because it meets the definition of an affected facility modified after August 31, 1983.

   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. Applicability to this subpart is dependent upon the nature and location of

operation. The diesel engines associated with MAQP #4814-00 are CI ICE engines constructed after July 11, 2005; however, these engines will not be considered affected sources unless operated as stationary sources.

7. 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. JMAC is considered a NESHAP-affected facility under 40 CFR Part 63 and is subject to the requirements of the following subparts.

   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 reciprocating internal combustion engine (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 JMAC, the RICE equipment to be used under MAQP #4814-00 may potentially be subject to this subpart because the facility is an area source of HAP emissions. However since the RICE is intended to be portable, JMAC is not required to comply with the applicable emission limitations and operating limitations of 40 CFR 63, Subpart ZZZZ. This subpart would become applicable if a stationary RICE remains in a location for more than 12 months.

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 an applicant 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. JMAC submitted the appropriate permit application fee for the current permit action.

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.

   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 person 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. JMAC has a PTE greater than 15 tons per year of particulate matter (PM), particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}), carbon monoxide (CO), volatile organic compounds (VOC), and oxides of nitrogen (NO_x); 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 Montana Air Quality Permit 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 Montana Air Quality Permit 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. JMAC submitted the required permit application for the current permit action. (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. JMAC submitted an affidavit of publication of public notice for the September 23, 2012 issue of the *Sidney Herald*, a newspaper of general circulation in the Town of Sidney in Richland County, as proof of compliance with the public notice requirements.

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 BACT shall be utilized. The required BACT analysis is included in Section III 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 JMAC 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 the permittee, 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 MAQP 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 the facility's PTE is less than 250 tons per year of any pollutant (excluding fugitive emissions).

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 (tpy) of any pollutant;

b. PTE > 10 tpy of any one HAP, PTE > 25 tpy of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or

c. PTE > 70 tpy of PM_{10} in a serious PM_{10} 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 #4814-00 for JMAC, the following conclusions were made:

   a. The facility's PTE is less than 100 tpy for any pollutant.

   b. The facility's PTE is less than 10 tpy for any single HAP and less than 25 tpy of combined HAPs.

   c. This source is not located in a serious PM_{10} nonattainment area.

   d. This facility is subject to a current NSPS (40 CFR 60, Subparts A, OOO, and potentially Subpart IIII).

   e. This facility is potentially subject to a current NESHAP standard (40 CFR 63, Subpart ZZZZ).

   f. This source is not a Title IV affected source

   g. This source is not a solid waste combustion unit.

   h. This source is not an EPA designated Title V source.

   Based on these facts, the Department has determined that JMAC 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, JMAC will be required to obtain a Title V Operating Permit.

III. BACT Determination

A BACT determination is required for each new or modified source. JMAC 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.

Crushing and Screening Particulate Emissions

Two types of emission controls are readily available and used for dust suppression of fugitive emissions that result from the operation of crushing and screening equipment and associated activities. These two control methods are water and chemical dust suppressant. Chemical dust suppressant could be used on the area surrounding the crushing and screening operation, and for emissions from the crushing and screening operation itself. However, in view of the fact that water is more readily available, more cost effective, is equally effective as chemical dust suppressant, while presenting less potential environmental quality degradation, water has been identified as the most appropriate method of pollution control of particulate emissions. In addition, water suppression has been required of recently permitted similar sources. However, JMAC may use chemical dust suppressant to assist in controlling particulate emissions.

The provisions of 40 CFR 60, Subpart OOO are applicable to affected facilities that are constructed after August 31, 1983. MAQP #4814-00 includes three crushers including one that was constructed prior to 1983. Therefore, the Telsmith Jaw crusher, constructed in 1976, is not required to comply with the conditions and limitations of 40 CFR 60, Subpart OOO. JMAC is required to have water spray bars and water available on site (at all times) and to apply the water,

as necessary, to maintain compliance with the opacity restrictions and reasonable precautions limitations. JMAC may also use chemical dust suppressant to maintain compliance with emissions limitations in Section II.A. of MAQP #4814-00. The Department determined that using water spray bars, water, and/or chemical dust suppressant to maintain compliance with the opacity requirements and reasonable precaution limitations constitutes BACT for the operation for the additional equipment.

Diesel-Fired Engines

Due to the limited amount of emissions produced by the diesel-fired engines and the lack of readily available cost effective add-on controls, add-on controls would be cost prohibitive. Generally, any new diesel engines would likely be required to comply with the federal engine emission limitations including, for example, EPA Tier emission standards for non-road engines (40 CFR Part 1039), New Source Performance Standard emission limitations for stationary compression ignition engines (40 CFR 60, Subpart IIII), or National Emissions Standards for Hazardous Air Pollutant Sources for Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ).

Therefore, the Department has determined that compliance with applicable federal standards and proper operation and maintenance constitutes BACT for these engines. The control options selected contain control equipment and control costs comparable to other recently permitted similar sources and are capable of achieving the appropriate emission standards.

IV. Emission Inventory**

	tons/year						
Emission Source	**PM**	**PM_{10}**	**$PM_{2.5}$**	**NOx**	**CO**	**VOC**	**SO2**
973 bhp MTU Diesel-fired engine/generator	1.41	1.41	1.41	45.10	24.43	10.71	8.74
John Deere Model 470 bhp Diesel-fired engine/generator	0.68	0.68	0.68	13.84	11.80	5.18	4.22
1976 Telsmith Jaw Crusher with VGF	2.63	1.18	0.22				
2011 MVP Cone Crusher	2.63	1.18	0.22				
Impact Crusher	2.63	1.18	0.22				
CedarRapids Twin Screen 6x20 (2010) (controlled)	4.82	1.62	0.11				
CedarRapids Twin Screen 6x20 (2010) - Fines (controlled)	7.88	4.82	0.11				
Haul Roads	5.68	1.57	0.16				
Feeder	0.05	0.05	0.05				
Conveyor Transfer Points (20) (controlled)	6.13	2.01	0.57				
Superior Stackers (3)	21.13	9.99	1.51				
Wash Plant Bulk Loading	0.02	0.02	0.02				
Total Emissions	**55.69**	**25.72**	**5.28**	**58.94**	**36.23**	**15.89**	**12.96**

1. Inventory reflects maximum allowable emissions for all pollutants based on maximum production and year-round operation (8,760 hours).

** CO = carbon monoxide
HAPs = hazardous air pollutants
bhp = brake horsepower
lb = pound
N/A = not applicable
ND = no data available
NO_X = oxides of nitrogen
PM = particulate matter
PM_{10} = 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
SO_X = oxides of sulfur
TPH = ton/hr = tons per hour
TPY = ton/yr = tons per year
VOC = volatile organic compounds
yr = year

973 bhp MTU Diesel-fired engine/generator

Operational Capacity of engine =	973	bhp
Operational capacity of generator (in kW) =	725	kw
Hours of Operation =	8,760	hours/yr
Manufactured: 2010		

PM Emissions:

Emission Factor (40 CFR 89 Subpart B, Table 1)=	0.15	g/bhp-hp
Calculation: (2,818.63 lbs/yr) * (ton/2000 lb) =	**1.41**	ton/yr
Calculation: (973 bhp) * (8,760 hours/yr) * (0.150 g/bhp-hr)* 0.0022046 lb/g =	**2,818.63**	lbs/yr

PM_{10} Emissions:

Emission Factor (40 CFR 89 Subpart B, Table 1) =	0.15	g/bhp-hp
Calculation: (2,818.63 lbs/yr) * (ton/2000 lb) =	**1.41**	ton/yr
Calculation: (973 bhp) * (8,760 hours/yr) * (0.150 g/bhp-hr)* 0.0022046 lb/g =	**2,818.63**	lbs/yr

$PM_{2.5}$Emissions:

Emission Factor (40 CFR 89 Subpart B, Table 1)=	0.15	g/bhp-hr
Calculation: (2,818.63 lbs/yr) * (ton/2000 lb) =	**1.41**	ton/yr
Calculation: (973 bhp) * (8,760 hours/yr) * (0.150 g/bhp-hr)* 0.0022046 lb/g =	**2,818.63**	lbs/yr

NOx Emissions:

Emission Factor (40 CFR 89 Subpart B, Table 1)=	4.80	g/bhp-hr
Calculation: (90,196.15 lbs/yr) * (ton/2000 lb) =	**45.10**	ton/yr
Calculation: (973 bhp) * (8,760 hours/yr) * (4.80 g/bhp-hr)* 0.0022046 lb/g =	**90,196.15**	lbs/yr

CO Emissions:

Emission Factor (40 CFR 89 Subpart B, Table 1) =	2.60	g/bhp-hr
Calculation: (48,856.25 lbs/yr) * (ton/2000 lb) =	**24.43**	ton/yr
Calculation: (973 bhp) * (8,760 hours/yr) * (2.60 g/bhp-hr)* 0.0022046 lb/g =	**48,856.25**	lbs/yr

VOC Emissions:

Emission Factor (AP-42, Sec. 3.3, Table 3.3-1, TOC, Exhaust + Crankcase, 10/96)=	2.51E-03	lbs/bhp-hr
Calculation: (21,428.88 lbs/yr) * (ton/2000 lb) =	**10.71**	ton/yr
Calculation: (973 bhp) * (8,760 hours/yr) * (0.00251 lbs/bhp-hr) =	**21,428.88**	lbs/yr

SOx Emissions:

Emission Factor (AP-42, Sec. 3.3, Table 3.3-1, 10/96)=	2.05E-03	lbs/bhp-hr
Calculation: (17,473.13 lbs/yr) * (ton/2000 lb) =	**8.74**	ton/yr
Calculation: (973 bhp) * (8,760 hours/yr) * (0.00205 lbs/bhp-hr) =	**17,473.13**	lbs/yr

John Deere Model 470 bhp Diesel-fired engine/generator

Operational Capacity of engine =	470	bhp
Operational capacity of generator (in kW)	350	kW
Hours of Operation =	8,760	hours/yr
Manufactured: 2009		

PM Emissions:

Emission Factor (40 CFR 89 Subpart B, Table 1) =	1.50E-01	g/bhp-hr
Calculation: (1,361.15 lbs/yr) * (ton/2000 lb) =	**0.68**	ton/yr
Calculation: (470 bhp) * (8,760 hours/yr) * (0.1500 g/bhp-hr) * 0.002204 lb/g =	**1,361.15**	lbs/yr

PM_{10} Emissions:		
Emission Factor (40 CFR 89 Subpart B, Table 1) =	1.50E-01	g/bhp-hr
Calculation: (1,361.15 lbs/yr) * (ton/2000 lb) =	**0.68**	ton/yr
Calculation: (470 bhp) * (8,760 hours/yr) * (0.1500 g/bhp-hr) * 0.002204 lb/g =	**1,361.15**	lbs/yr
$PM_{2.5}$ Emissions:		
Emission Factor (40 CFR 89 Subpart B, Table 1) =	1.50E-01	g/bhp-hr
Calculation: (1,361.15 lbs/yr) * (ton/2000 lb) =	**0.68**	ton/yr
Calculation: (470 bhp) * (8,760 hours/yr) * (0.1500 g/bhp-hr) * 0.002204 lb/g =	**1,361.15**	lbs/yr
NOx Emissions:		
Emission Factor (40 CFR 89 Subpart B, Table 1, NMHC+NOx) =	3.00	g/bhp-hr
Calculation: (1,361.15 lbs/yr) * (ton/2000 lb) =	**13.84**	ton/yr
Calculation: (470 bhp) * (8,760 hours/yr) * (3.00 g/bhp-hr) * 0.0022406 lb/g =	**27,674.99**	lbs/yr
CO Emissions:		
Emission Factor **(40 CFR 89 Subpart B, Table 1) =**	2.60E+00	g/bhp-hr
Calculation: (1,361.15 lbs/yr) * (ton/2000 lb) =	**11.80**	ton/yr
Calculation: (470 bhp) * (8,760 hours/yr) * (2.60 g/bhp-hr) * 0.0022406 lb/g =	**23,593.85**	lbs/yr
VOC Emissions:		
Emission Factor =	2.51E-03	lbs/bhp-hr
Calculation: (1,361.15 lbs/yr) * (ton/2000 lb) =	**5.18**	ton/yr
Calculation: (470 bhp) * (8,760 hours/yr) * (0.0025 lbs/bhp-hr) =	**10,351.05**	lbs/yr
SOx Emissions:		
Emission Factor **(AP-42, Sec. 3.3, Table 3.3-1, 10/96)=**	2.05E-03	lbs/bhp-hr
Calculation: (1,361.15 lbs/yr) * (ton/2000 lb) =	**4.22**	ton/yr
Calculation: (470 bhp) * (8,760 hours/yr) * (0.0021 lbs/bhp-hr) =	**8,440.26**	lbs/yr
1976 Telsmith Jaw Crusher with VGF		
Process Rate	500	ton/hr
PM Emissions:		
Emission Factor (AP 42, Table 11.19.2-2, 8/04, controlled)	0.0012	lb/ton
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.0012 lb/ton) * (ton/2000 lb) =	**2.63**	ton/yr
PM_{10} Emissions:		
Emission Factor (AP 42, Table 11.19.2-2, 8/04, controlled)	0.00054	lb/ton
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.00054 lb/ton) * (ton/2000 lb) =	**1.18**	ton/yr
$PM_{2.5}$ Emissions:		
Emission Factor (AP 42, Table 11.19.2-2, 8/04, controlled)	0.0001	lb/ton
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.0001 lb/ton) * (ton/2000 lb) =	**0.22**	ton/yr
2011 MVP Cone Crusher		
Process Rate	500	ton/hr
PM Emissions:		
Emission Factor (AP 42, Table 11.19.2-2, 8/04, controlled)	0.0012	lb/ton
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.0012 lb/ton) * (ton/2000 lb) =	**2.63**	ton/yr
PM_{10} Emissions:		
Emission Factor (AP 42, Table 11.19.2-2, 8/04, controlled)	0.00054	lb/ton
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.00054 lb/ton) * (ton/2000 lb) =	**1.18**	ton/yr

$PM_{2.5}$ Emissions:

Emission Factor (AP 42, Table 11.19.2-2, 8/04, controlled)	0.0001	lb/ton
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.0001 lb/ton) * (ton/2000 lb) =	**0.22**	ton/yr

Impact Crusher

Maximum Process Rate	500	ton/hr
PM Emissions:		
Emission Factor (AP 42, Table 11.19.2-2, 8/04, controlled)	0.0012	lb/ton
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.0012 lb/ton) * (ton/2000 lb) =	**2.63**	ton/yr

PM_{10} Emissions:

Emission Factor (AP 42, Table 11.19.2-2, 8/04, controlled)	0.00054	lb/ton
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.00054 lb/ton) * (ton/2000 lb) =	**1.18**	ton/yr

$PM_{2.5}$ Emissions:

Emission Factor (AP 42, Table 11.19.2-2, 8/04, controlled)	0.0001	lb/ton
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.0001 lb/ton) * (ton/2000 lb) =	**0.22**	ton/yr

Screening (controlled) - (SCC 3-05-020-02, 03)
CedarRapids Twin Screen 6x20 (2010) (controlled)

Hours of Operation	8,760	hrs/yr
Process Rate	500	ton/hr
Total PM Emissions:		
Emission Factor (AP 42, Table 11.19.2-2, 8/04, controlled)	0.0022	lb/ton
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.0022 lb/ton) * (ton/2000 lb) =	**4.82**	ton/yr

Total PM_{10} Emissions:

Emission Factor (AP 42, Table 11.19.2-2, 8/04, controlled)	0.00074	lb/ton
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.00074 lb/ton) * (ton/2000 lb) =	**1.62**	ton/yr

Total $PM_{2.5}$ Emissions:

Emission Factor (AP 42, Table 11.19.2-2, 8/04, controlled)	0.00005	lb/ton
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.00005 lb/ton) * (ton/2000 lb) =	**0.11**	ton/yr

CedarRapids Twin Screen 6x20 (2010) - Fines (controlled)

Hours of Operation	8,760	hrs/yr
Process Rate (AP 42, Table 11.19.2-2, 8/04, controlled)	500	ton/hr
Total PM Emissions:		
Emission Factor	0.0036	lb/ton
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.0036 lb/ton) * (ton/2000 lb) =	**7.88**	ton/yr

Total PM_{10} Emissions:

Emission Factor (AP 42, Table 11.19.2-2, 8/04, controlled)	0.0022	lb/ton
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.0022 lb/ton) * (ton/2000 lb) =	**4.82**	ton/yr

Total $PM_{2.5}$ Emissions: (assume same as Screening)

Emission Factor (AP 42, Table 11.19.2-2, 8/04, controlled)	0.00005	lb/ton
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.00005 lb/ton) * (ton/2000 lb) =	**0.11**	ton/yr

Haul Roads

Vehicle Miles Traveled	5	VMT/day
VMT per Hour	0.21	VMT/hr
Hours of Operation	8,760	hrs/yr
	365	days/yr

PM Emissions:

Emission Factor (AP 42, Ch. 13.2.2, 11/06) = k * (s / 12)^a * (W / 3)^b =	12.46	lb/VMT
Where: k = constant (Value for PM30/TSP)	4.9	lbs/VMT
s = surface silt content (Mean value, sand/gravel processing, material storage area)	7.1	%
W = mean vehicle weight (1994 average loaded/unloaded or a 40 ton truck)	54	tons
a = constant (Value for PM30/TSP)	0.7	
b = constant (Value for PM30/TSP)	0.45	
Control Efficiency	50	%
Calculation: (8760 hrs/yr) * (0.21 VMT/hr) * (12.46 lb/VMT) * (ton/2000 lb) =	11.37	tons/yr
Calculation: (8760 hrs/yr) * (0.21 VMT/hr) * (12.46 lb/VMT) * (ton/2000 lb) * (1-50/100) =	**5.68**	tons/yr

PM_{10} Emissions:

Emission Factor (AP 42, Ch. 13.2.2, 11/06)= k * (s / 12)^a * (W / 3)^b = 3.43 lb/VMT	3.43	lb/VMT
Where: k = constant (Value for PM10)	1.5	lbs/VMT
s = surface silt content (Mean value, sand/gravel processing, material storage area)	7.1	%
W = mean vehicle weight (1994 average loaded/unloaded or a 40 ton truck)	54	tons
a = constant (Value for PM10)	0.9	
b = constant (Value for PM10)	0.45	
Control Efficiency	50	%
Calculation: (8760 hrs/yr) * (0.21 VMT/hr) * (3.43 lb/VMT) * (ton/2000 lb) =	3.13	tons/yr
Calculation: (8760 hrs/yr) * (0.21 VMT/hr) * (3.43 lb/VMT) * (ton/2000 lb) * (1-50/100) =	**1.57**	tons/yr

$PM_{2.5}$ Emissions:

Emission Factor (AP 42, Ch. 13.2.2, 11/06)= k * (s / 12)^a * (W / 3)^b = 0.34 lb/VMT	0.34	lb/VMT
Where: k = constant (Value for PM2.5)	0.15	lbs/VMT
s = surface silt content (Mean value, sand/gravel processing, material storage area)	7.1	%
W = mean vehicle weight (1994 average loaded/unloaded or a 40 ton truck)	54	tons
a = constant (Value for PM2.5	0.9	
b = constant (Value for PM2.5)	0.45	
Control Efficiency	50	%
Calculation: (8760 hrs/yr) * (0.21 VMT/hr) * (0.34 lb/VMT) * (ton/2000 lb) =	0.31	tons/yr
Calculation: (8760 hrs/yr) * (0.21 VMT/hr) * (0.34 lb/VMT) * (ton/2000 lb) * (1-50/100) =	**0.16**	tons/yr

Feeder

Process Rate	750	ton/hr
Hours of Operation	8,760	hrs/yr

PM Emissions:

Emission Factor (assume PM=PM_{10}) (AP 42, Sec. 11.19.2-2, 8/2004)	1.60E-05	lb/ton
Calculation: (750 ton/hr) * (8760 hrs/yr) * (0.000016 lb/ton) * (ton/2000 lb) =	0.05	ton/yr

PM_{10} Emissions:

Emission Factor (assume PM=PM_{10}) (AP 42, Sec. 11.19.2-2, 8/2004)	1.60E-05	lb/ton
Calculation: (750 ton/hr) * (8760 hrs/yr) * (0.000016 lb/ton) * (ton/2000 lb) =	0.05	ton/yr

$PM_{2.5}$ Emissions:

Emission Factor (assume PM=PM_{10}) (AP 42, Sec. 11.19.2-2, 8/2004)	1.60E-05	lb/ton
Calculation: (750 ton/hr) * (8760 hrs/yr) * (0.000016 lb/ton) * (ton/2000 lb) =	0.05	ton/yr

Conveyor Transfer Points (20) (controlled) - (SCC 3-05-020-06)

Process Rate	500	ton/hr
Hours of Operation	8,760	hrs/yr
Number of Transfers	20	transfer

Total PM Emissions:

Emission Factor (AP 42, Table 11.19.2-2, 8/04)	0.00014	lb/ton
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.00014 lb/ton) * (ton/2000 lb) * (20 transfer) =	**6.13**	ton/yr

Total PM_{10} Emissions:

Emission Factor (AP 42, Table 11.19.2-2, 8/04)	4.60E-05	lb/ton
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.000046 lb/ton) * (ton/2000 lb) * (20 transfer) =	**2.01**	ton/yr

Total $PM_{2.5}$ Emissions:

Emission Factor (AP 42, Table 11.19.2-2, 8/04)	1.30E-05	lb/ton
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.000013 lb/ton) * (ton/2000 lb) * (20 transfer) =	**0.57**	ton/yr

Superior Stackers (3)

Process Rate	500	ton/hr
Hours of Operation	8,760	hrs/yr
Number of stackers	3	stackers

PM Emissions (AP 42, Sec. 13.2.4.3, 11/06):

Emission Factor = k (0.0032) * (U/5)^1.3 * (M / 2)^-1.4 =	0.00322	lb/ton
Where: k = particle size multiplier (Value for PM < 30 microns)	0.74	
U = mean wind speed (Average)	8.15	mph
M = material moisture content (Average)	2.53	%
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.00322 lb/ton) * (ton/2000 lb) * (3 stackers) =	21.13	ton/yr

PM_{10} Emissions (AP 42, Sec. 13.2.4.3, 11/06):

Emission Factor = k (0.0032) * (U/5)^1.3 * (M / 2)^-1.4 =	0.00152	lb/ton
Where: k = particle size multiplier (Value for PM < 30 microns)	0.35	
U = mean wind speed (Average)	8.15	mph
M = material moisture content (Average)	2.53	%
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.00152 lb/ton) * (ton/2000 lb) * (3 stackers) =	9.99	ton/yr

$PM_{2.5}$ Emissions (AP 42, Sec. 13.2.4.3, 11/06):

Emission Factor = k (0.0032) * (U/5)^1.3 * (M / 2)^-1.4 =	0.00023	lb/ton
Where: k = particle size multiplier (Value for PM < 30 microns)	0.053	
U = mean wind speed (Average)	8.15	mph
M = material moisture content (Average)	2.53	%
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.00023 lb/ton) * (ton/2000 lb) * (3 stackers) =	1.51	ton/yr

Wash Plant Bulk Loading

Process Rate	300	ton/hr
Hours of Operation	8,760	hrs/yr

PM Emissions:

Emission Factor (assume PM=PM_{10}) (AP 42, Sec. 11.19.2-2, 8/2004)	1.60E-05	lb/ton
Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.000016 lb/ton) * (ton/2000 lb) =	0.02	ton/yr

PM_{10} Emissions:

Emission Factor (assume PM=PM_{10}) (AP 42, Sec. 11.19.2-2, 8/2004)	1.60E-05	lb/ton
Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.000016 lb/ton) * (ton/2000 lb) =	0.02	ton/yr

$PM_{2.5}$ Emissions:

Emission Factor (assume PM=PM_{10}) (AP 42, Sec. 11.19.2-2, 8/2004)	1.60E-05	lb/ton
Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.000016 lb/ton) * (ton/2000 lb) =	0.02	ton/yr

V. Air Quality Impacts

This permit contains conditions and limitations that would protect air quality for the site and surrounding area. Furthermore, this facility is a portable source that would operate on an intermittent and temporary basis, so any effects to air quality will be minor and of limited duration.

VI. Ambient Air Impact Analysis

Based on the information provided and the conditions established in MAQP #4814-00, the Department determined that the impact from this permitting action will be minor. The Department believes it 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	
X		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)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		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?

YES	NO	
	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 there are no taking or damaging implications associated with this permit action.

VIII. Environmental Assessment

An environmental assessment, required by the Montana Environmental Policy Act, was completed for this project. A copy is attached.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air Resources Management Bureau
P.O. Box 200901, Helena, MT 59620
(406) 444-3490

FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued To: JMAC Resources, Inc.
5009 139th Avenue NW
Williston, ND 58801

Montana Air Quality Permit number (MAQP): **4814-00**
Preliminary Determination Issued: 10/29/2012
Department Decision Issued: 11/14/2012
Permit Final: 11/30/2012

1. *Legal Description of Site*: The JMAC Resources Inc. (JMAC) portable non-metallic mineral crushing, screening, and wash plant (CO-2) would initially be located at Section 34, Township 27 North, Range 56 East in Richland County, Montana. However, MAQP #4814-00 applies while operating at any location in Montana, except those areas having a Montana Department of Environmental Quality- Air Resources Management Bureau (Department)-approved permitting program, areas considered tribal lands, or areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) nonattainment areas. A Missoula County air quality permit would be required for locations within Missoula County, Montana. An addendum would be required for locations in or within 10 km of certain PM_{10} nonattainment areas.

2. *Description of Project*: The Department received a permit application from JMAC for the operation of a portable crushing facility with a total combined maximum rated design process rate of 1,500 tons per hour (TPH) of crushing capacity and 1,000 TPH of screening capacity. JMAC proposes to utilize two portable electrical generator sets to supply electrical power to the plant.

3. *Objectives of Project*: The objective of the project would be to produce business and revenue for the company through the sale and use of aggregate. The issuance of MAQP #4814-00 would allow JMAC to operate the permitted equipment at various locations throughout Montana (as described above), including the proposed initial site location.

4. *Alternatives Considered*: In addition to the proposed action, the Department also considered the "no-action" alternative. The "no-action" alternative would deny issuance of the air quality preconstruction permit to the proposed facility. However, the Department does not consider the "no-action" alternative to be appropriate because JMAC has demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the "no-action" alternative was eliminated from further consideration.

5. *A Listing of Mitigation, Stipulations, and Other Controls*: A list of enforceable conditions, including a BACT analysis, would be included in MAQP #4814-00.

6. *Regulatory Effects on Private Property*: The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.

7. The following table summarizes the potential physical and biological effects of the proposed project on the human environment. The "no-action" alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Terrestrial and Aquatic Life and Habitats			X			Yes
B	Water Quality, Quantity, and Distribution			X			Yes
C	Geology and Soil Quality, Stability and Moisture			X			Yes
D	Vegetation Cover, Quantity, and Quality			X			Yes
E	Aesthetics			X			Yes
F	Air Quality			X			Yes
G	Unique Endangered, Fragile, or Limited Environmental Resources			X			Yes
H	Demands on Environmental Resource of Water, Air and Energy			X			Yes
I	Historical and Archaeological Sites				X		Yes
J	Cumulative and Secondary Impacts			X			Yes

SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS: The following comments have been prepared by the Department.

A. Terrestrial and Aquatic Life and Habitats

There is a possibility that terrestrials would use the same area as the project. Observations from the Montana (MT) Opencut permit (#2213) indicate the existence of deer, rodents, song birds, coyotes, foxes, raptors, insects and various other animal species. However, this permitting action would be expected to have a minor effect on terrestrial and aquatic life and habitats, as the proposed plant would operate within an existing open cut gravel pit. Furthermore, the air emissions would likely have only minor effects on terrestrial and aquatic life because facility emissions would be well dispersed in the area of operation (see Section 7.F of this EA) and would have intermittent and seasonal operations. The crushing and screening operation would be considered a minor source of emissions, by industrial standards, with intermittent and seasonal operations. Therefore, only minor and temporary effects on terrestrial and aquatic life would be expected as a result of equipment operations or from pollutant deposition.

B. Water Quality, Quantity and Distribution

Water would be required for dust suppression on the mineral processing equipment and surrounding facility area, including haul roads. This water use would be expected to cause only minor, if any, impacts to water resources because the facility is small, and only a small volume of water would be required to control air pollutant emissions and deposition of air pollutants (as described in Section 7.F of this EA). The site is in an existing open-cut pit where water runoff would be more readily controlled. However, the Department determined that, due to dispersion characteristics of pollutants and conditions that would be placed in MAQP #4814-00, any impacts from deposition of pollutants on water quality, quantity, and distribution would be minor.

C. Geology and Soil Quality, Stability and Moisture

The permit application indicated that the operation would be located on a flat terrace above Day Creek on a scoria outcropping. The eastern edge would have several draws draining eastward

to Day Creek. Onsite soils would be primarily Tinsley, Vida Clay loam, and Williams Clay Loam. No disruptions would occur that would reduce the productivity or fertility of the soil at the site based upon the MT open cut regulations of stripping topsoil and overburden separately.

Because the equipment would be operating at a facility which would be considered a minor source of emissions by industrial standards, impacts from the emissions from the crushing facility would be minor. The crushing and screening operation would have only minor impacts on soils in any proposed site location because the facility is relatively small in size, would use only relatively small amounts of water for pollution control, and would only have seasonal and intermittent operations. Therefore, any affects upon geology and soil quality, stability, and moisture at any proposed operational site would be minor.

D. Vegetation Cover, Quantity, and Quality

The application states that based on MT Opencut permit observations the location of the crushing and screening plant would have a mix of range grasses and agricultural field species, grasses, yucca, creeping juniper, and shrubs. Only minor impacts would be expected to occur on vegetative cover, quality, and quantity because the facility would operate in an area where vegetation has been previously disturbed. Because the equipment would be a minor source of emissions by industrial standards, impacts from the emissions from the crushing and screening facility would also be minor. As described in Section 7.F of this EA, the amount of air emissions from this facility would be minor. As a result, the corresponding deposition of the air pollutants on the surrounding vegetation would also be minor.

E. Aesthetics

The application states that the disturbed area for the proposed project would be approximately 25 acres, in a pasture utilized for cattle, located approximately one mile from the nearest house and approximately eight miles from the nearest town, Culbertson. The crushing and screening facility would be visible and would create noise while operating at the proposed site. However, activity would occur within an existing opencut pit and, based upon the MT opencut regulations, stripping of topsoil and overburden would occur separately and would be used to create noise buffers in the form of stockpiles along the perimeter of the site and for reclamation of the site in the future. Further, MAQP #4814-00 would include conditions to control emissions, including visible emissions, from the plant. The facility would operate on an intermittent and seasonal basis, and would be a small industrial source. Therefore, any visual aesthetic impacts would be short-lived and are expected to be minor.

F. Air Quality

Air quality impacts from the proposed project would likely be minor because the facility would be relatively small and operate on an intermittent and temporary basis. MAQP #4814-00 includes conditions limiting the facility's opacity; require water and water spray bars be available on site and used to ensure compliance with opacity standards; and limit the facility's crushing production.

Further, the Department determined that this facility would be a minor source of emissions as defined under the Title V Operating Permit Program because the source's potential to emit would be below the major source threshold. Pollutant deposition from the facility would be expected to be minimal because the pollutants emitted are widely dispersed (from factors such as wind speed and wind direction) and exhibit minimal deposition on the surrounding area. Therefore, air quality impacts from operating the crushing facility in this area would be expected to be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The proposed project would impact the unique endangered, fragile, or limited environmental resources because emissions of PM_{10}, oxides of nitrogen (NO_x), carbon monoxide (CO), volatile organic compounds (VOC), and sulfur dioxide (SO_2) would increase in the area due to the operation of the facility. In an effort to assess any potential impacts to any unique endangered, fragile, or limited environmental resources in the initial proposed area of operation (Section 34, Township 27 North, Range 56 East in Richland County, Montana) the Department contacted the Natural Resource Information System – Montana Natural Heritage Program (MNHP). MNHP conducted a search of the defined area which is defined by the township and range of the proposed site, with an additional one-mile buffer. Search results concluded there is one species of concern within the area. The known species of concern is the Whooping Crane.

Specific effects of operating the crushing and screening facility in this area would be minor since the facility is relatively small in size and located within an existing gravel pit. In addition the source would have only seasonal and intermittent operations in the area. Therefore, impacts to unique, endangered, fragile, or limited environmental resources would be minor.

H. Demands on Environmental Resource of Water, Air and Energy

Due to the size of the facility, the crushing and screening operation would require only small quantities of water, air, and energy for proper operation. Small quantities of water would be used for dust suppression and would control particulate emissions being generated at the site. The facility would have limited production, and would have seasonal and intermittent use. In addition, impacts to air resources would be minor because the source is small by industrial standards, with intermittent and seasonal operations, and because air pollutants generated by the facility would be widely dispersed. Energy requirements would also be small, as the diesel engines would use small amounts of fuel. The Department determined that any impacts to water, air, and energy resources in any given area would be minor due to the dispersion characteristics of the pollutants, the atmosphere, and the conditions contained in MAQP #4814-00.

I. Historical and Archaeological Sites

The Department contacted the Montana Historical Society - State Historical Preservation Office (SHPO) in an effort to identify any historical and/or archaeological sites that may be present in the proposed initial location of the facility. According to their records there are no previously recorded sites in the area of the proposed project location and there is a low likelihood of adverse disturbance to any known archaeological or historic site. Therefore, no impacts upon historical or archaeological sites would be expected as a result of this project.

J. Cumulative and Secondary Impacts

The operation of the crushing and screening facility would likely cause minor cumulative and secondary impacts to the physical and biological aspects of the human environment because the facility would be limited in the amount of emissions allowed to be released to the atmosphere. Emissions and noise would cause minimal disturbance because the equipment is small and the facility would be expected to operate in areas designated and used for such operations. The proposed project would be short-term in nature, and likely have minor cumulative effects upon resources within the area. These resources include water, terrestrial and aquatic life, soils, and vegetation. Overall, cumulative and secondary impacts to the physical and biological aspects of the human environment would likely be minor.

8. The following table summarizes the potential economic and social effects of the proposed project on the human environment. The "no-action" alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Social Structures and Mores				X		Yes
B	Cultural Uniqueness and Diversity				X		Yes
C	Local and State Tax Base and Tax Revenue			X			Yes
D	Agricultural or Industrial Production			X			Yes
E	Human Health			X			Yes
F	Access to and Quality of Recreational and Wilderness Activities				X		Yes
G	Quantity and Distribution of Employment			X			Yes
H	Distribution of Population				X		Yes
I	Demands for Government Services			X			Yes
J	Industrial and Commercial Activity			X			Yes
K	Locally Adopted Environmental Plans and Goals			X			Yes
L	Cumulative and Secondary Impacts			X			Yes

SUMMARY OF COMMENTS ON POTENTIAL ECONOMIC AND SOCIAL EFFECTS: The following comments have been prepared by the Department.

A. Social Structures and Mores

The proposed project would cause minor, if any, impacts or disruptions to native or traditional lifestyles or communities (social structures or mores) in the area because the proposed project would take place in a relatively remote location and because the source is a minor source of emissions (by industrial standards) and would only have intermittent operations. Further, the facility would be required to operate according to the conditions that would be placed in MAQP #4814-00. Therefore, the existing social structures and mores would not be affected as a result of this permitting action.

B. Cultural Uniqueness and Diversity

The cultural uniqueness and diversity of this area would not likely be impacted by the operation of the proposed crushing and screening facility because the facility is a portable source, with seasonal and intermittent operations. Therefore, there would not be any impacts expected to the cultural uniqueness and diversity of this.

C. Local and State Tax Base and Tax Revenue

The operation of the crushing and screening facility would likely have little, if any, impact on the local and state tax base and tax revenue because the facility would be a minor industrial source of emissions and would have seasonal and intermittent operations. According to the application, the facility would employ only 5 to 10 employees. Thus, only minor impacts to the local and state tax base and revenue could be expected from the employees and facility production. Furthermore, the impacts to local tax base and revenue would be expected to be minor because the source would be portable and the money generated for taxes would be widespread. Therefore, the Department determined that there would be minor effects to local and state tax base and tax revenue.

D. Agricultural or Industrial Production

The equipment at the crushing and screening operation would have only a minor impact on local industrial production since the facility is a minor source of emissions (by industrial standards). There could be minor effects on agricultural land from the deposition of pollutants (as described in Section 7.F of this EA) but the facility operations would be small and temporary in nature, and would be permitted with operational conditions and limitations that would minimize impacts upon surrounding vegetation (as described in Section 7.D of this EA). Therefore, the Department determined that there would be minor effects to agricultural or industrial production.

E. Human Health

MAQP #4814-00 would incorporate conditions to ensure that the crushing and screening facility would operate in compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health. As described in Section 7.F. of this EA, the air emissions from this facility would be minimized by the use of water spray and other conditions that would be established in MAQP #4814-00. Therefore, only minor impacts would be expected upon human health from the proposed crushing and screening facility.

F. Access to and Quality of Recreational and Wilderness Activities

Based on information received from JMAC, no recreational activities or wilderness areas are near the proposed project site would likely be affected. Therefore, no impacts to the access to and quality of recreational and wilderness activities would be expected.

G. Quantity and Distribution of Employment

The portable crushing and screening operation would be considered small and would only require a five to ten employees to operate. The crushing and screening operation would be considered a portable source, with seasonal and intermittent operations and would not be expected to have any long-term affects upon the quantity and distribution of employment in any given area of operation. Therefore, minor effects upon the quantity and distribution of employment in these areas would be expected.

H. Distribution of Population

The portable crushing and screening operation is a portable industrial facility that would only require a limited number of employees. No individuals would be expected to permanently relocate to this area as a result of operating the crushing and screening facility. Therefore, the crushing and screening facility would not likely impact the normal population distribution in the initial area of operation or any future operating site.

I. Demands for Government Services

Minor increases may be seen in traffic on existing roadways in the area while the crushing and screening facility is being operated. In addition, government services would be required for acquiring the appropriate permits for the proposed project and to verify compliance with the permits that would be issued. However, demands for government services would be expected to be minor.

J. Industrial and Commercial Activity

The crushing and screening operations would represent only a minor increase in the industrial activity in the given area because of the small size of the operations and the portable and temporary nature of the facility. Therefore, the Department determined that there would be minor effects to industrial or commercial activity as a result of the proposed operation.

K. Locally Adopted Environmental Plans and Goals

The Department is not aware of any locally adopted environmental plans or goals that would be affected by the proposed project. JMAC would be allowed, by MAQP #4814-00, to operate in areas designated by Environmental Protection Agency as attainment or unclassified for ambient air quality. MAQP #4814-00 contains operational restrictions for protecting air quality and for keeping facility emissions in compliance with any applicable ambient air quality standards as a locally adopted environmental plan or goal for operating at this proposed site. Because the proposed crushing and screening facility would be a portable source and would likely have intermittent and seasonal operations, any impacts from the project would be expected to be minor and short-lived.

L. Cumulative and Secondary Impacts

The crushing and screening operation would cause minor cumulative and secondary impacts to the social and economic aspects of the human environment in the immediate areas of operation because the source would be a portable and temporary source. Small increases in traffic would have minor effects on local traffic in the immediate area. Because the source is relatively small and temporary, only minor economic impacts to the local economy would be expected from operating the facility.

Recommendation: No Environmental Impact Statement (EIS) is required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permitting action is for the construction and operation of a portable non-metallic mineral processing facility MAQP #4814-00 includes conditions and limitations to ensure the facility will operate in compliance with all applicable rules and regulations. In addition, there are no significant impacts associated with this proposal.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

Individuals or groups contributing to this EA: Department of Environmental Quality – Air Resources Management Bureau, Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

EA prepared by: Deanne Fischer
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