



Montana Department of  
**ENVIRONMENTAL QUALITY**

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June 26, 2012

Dave Fowler  
Gallatin County  
205 Baxter Lane West  
Bozeman, MT 59718

Dear Mr. Fowler:

Montana Air Quality Permit #2523-03 is deemed final as of June 26, 2012 by the Department of Environmental Quality (Department). This permit is for a portable 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,

Charles Homer  
Manager, Air Permitting, Compliance, and Registration  
Air Resources Management Bureau  
(406) 444-5279

Tashia Love  
Environmental Science Specialist  
Air Resources Management Bureau  
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CH:TL  
Enclosure

Montana Department of Environmental Quality  
Permitting and Compliance Division

Montana Air Quality Permit #2523-03

Gallatin County  
205 Baxter Lane West  
Bozeman, MT 59718

June 26, 2012



## MONTANA AIR QUALITY PERMIT

Issued To: Gallatin County  
205 Baxter Lane West  
Bozeman, MT 59718

MAQP: #2523-03  
Administrative Amendment (AA) Request:  
Received: 5/9/2012  
Department's Decision Issued: June 8, 2012  
Permit Final: June 26, 2012  
AFS #: 777-2523

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Gallatin County (Gallatin) 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. Plant Location

Gallatin operates a portable crushing/screening facility initially located in the SE ¼ of Section 35, Township 1 South, Range 4 East, in Gallatin County, Montana. MAQP #2523-03 applies while operating at any location in Montana, except those areas having a 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<sub>10</sub>) nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* An addendum will be required for locations in or within 10 km of certain PM<sub>10</sub> nonattainment areas.

#### B. Current Permit Action

On May 9, 2012, the Department received a request to include an integral screen within the cone crusher that was left out of the original permit due to an administrative error. Gallatin requests that the screen be accounted for in the permit and emission inventory. The current permit action modifies the permit to include the requested changes and updates the permit to reflect current permit language, format, rule references, and emission inventory.

### 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 of 15% or greater averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO).
2. All visible emissions from any other NSPS-affected equipment, such as screens or conveyor transfers, shall not exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO).
3. All visible emissions from any non-NSPS affected equipment shall not exhibit an opacity of 20% or greater averaged over 6 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).

5. Gallatin 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. Gallatin 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. Gallatin shall not operate more than two crushers at any given time and the combined maximum design capacity shall not exceed 460 tons per hour (TPH) (ARM 17.8.749).
8. Gallatin shall not operate more than one screen at any given time and the maximum design capacity shall not exceed 230 TPH (ARM 17.8.749).
9. Gallatin shall not operate more than one diesel-fired engine/generator at any given time and the maximum design capacity shall not exceed 430-horsepower (hp) (ARM 17.8.749).
10. If the permitted equipment is used in conjunction with any other equipment owned or operated by Gallatin, 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. Gallatin shall comply with all applicable standards and limitations, and the 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. Gallatin 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 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 (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 crushing/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. Gallatin 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, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

3. Gallatin 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(1)(d) (ARM 17.8.745).
4. Gallatin 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 Gallatin 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 (ARM 17.8.749).

### D. Notification

1. Within 30 days of commencement of construction of any NSPS-affected equipment, Gallatin shall notify the Department of the date of commencement of construction of the affected equipment (ARM 17.8.340 and 40 CFR 60, Subpart A and Subpart OOO).
2. Within 15 days of the actual start-up date of any NSPS-affected equipment, Gallatin shall submit written notification to the Department of the initial start-up date of the affected equipment (ARM 17.8.340 and 40 CFR 60, Subpart A and Subpart OOO).
3. Within 15 days of the actual start-up date of any non-NSPS-affected equipment, Gallatin shall submit written notification to the Department of the initial start-up date of the affected equipment (ARM 17.8.749).

### SECTION III: General Conditions

- A. Inspection – Gallatin 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 Emission Monitoring System (CEMS), Continuous Emission 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 Gallatin fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Gallatin 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), 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 Gallatin 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. Gallatin 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  
Gallatin County  
MAQP #2523-03

I. Introduction/Process Description

Gallatin County (Gallatin) owns and operates a portable gravel crushing/screening facility.

A. Permitted Equipment

Gallatin owns and operates a portable crushing/screening facility consisting of one jaw crusher and one cone crusher (combined maximum capacity up to 460 tons per hour (TPH)), an integral screen within the cone crusher (maximum capacity of 230 TPH), a 430-horsepower (hp) diesel-fired engine/generator, and associated equipment.

B. Source Description

Gallatin uses this crushing/screening plant and associated equipment to crush rock for use as road material. For a typical operational setup, materials are loaded into the feed hopper, conveyed to the jaw crusher, conveyed to the closed circuit crushing screen plant then discharged onto the final piling conveyor. Materials are sent to stockpile for use as road material.

C. Permit History

MAQP #2523-00 was issued final in March 23, 1989.

On March 3, 1995, Gallatin County requested MAQP #2523-00 be modified to reflect that the maximum production rate was physically limited to 120 TPH, due to the size cones they installed on the 1986 El-Jay crusher. **MAQP #2523-01** limited the production rate of the 1986 El-Jay crusher to a maximum production rate of 120 TPH, relieving Gallatin from any requirements of 40 CFR 60, Subpart 000. MAQP #2523-01 replaced MAQP #2523-00.

On April 8, 2009, the Department of Environmental Quality (Department) received a request to change the maximum design capacity of the existing cone crusher to accurately reflect current operations. Gallatin indicated they will be adding a jaw crusher to their current operations at some time in the near future and requested the permit be modified to include the addition of that unit. In addition, Gallatin provided the hp rating of the diesel-fired engine/generator. This permit action modified the permit to include the requested changes and updates the permit to reflect current permit language, format, and rule references. **MAQP #2523-02** replaced MAQP #2523-01.

D. Current Permit Action

On May 9, 2012, the Department received a request to include an integral screen within the cone crusher that was left out of the original permit due to an administrative error. Gallatin requests that the screen be accounted for in the permit and emission inventory. The current permit action modifies the permit to include the requested changes and updates the permit to reflect current permit language, format, rule references, and emission inventory. **MAQP #2523-03** replaces MAQP #2523-02.

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 location 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 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).

Gallatin 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 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
2. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
3. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
4. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
5. ARM 17.8.223 Ambient Air Quality Standard for PM<sub>10</sub>



Gallatin 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.
  3. ARM 17.8.310 Particulate Matter, Industrial Process. 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.
  4. 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.
  5. ARM 17.8.340 Standard of Performance for New Stationary Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). Gallatin 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 Gallatin, the portable crushing equipment to be used under MAQP #2523-03 is subject to this subpart because it meets the definition of an affected facility and the cone crusher was constructed after August 31, 1983. In addition, the jaw crusher may potentially be subject to this subpart.
    - c. 40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition (CI) Internal Combustion Engines (ICE) indicates that NSPS requirements apply to owners or operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE is manufactured after April 1, 2005, and is not a fire pump engine. In order to keep the permit de minimis-friendly, this permit authorizes the use of a diesel-fired engines/generator and limits the engine capacity to 430 hp or less. The permit application states that the facility will be powered primarily by a diesel-fired engine/generator that was manufactured in 1986; therefore, this CI ICE will not be subject to this Subpart. However, if this facility changes the diesel-fired engine/generator used, this Subpart is potentially applicable.

6. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The source, as defined and applied in 40 CFR Part 63, shall comply with the requirements of 40 CFR Part 63, as listed below:

- a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to a National Emission Standard for Hazardous Air Pollutants (NESHAP) Subpart as listed below:
- b. 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants (HAP) for Stationary Reciprocating Internal Combustion Engines. An owner or operator of a stationary RICE at a major or area source of Hazardous Air Pollutant (HAP) emissions is subject to this rule except if the stationary RICE is being tested at a stationary RICE test cell/stand. This subpart is potentially applicable if this facility becomes a stationary source. Because this permit is written in a de minimis-friendly manner, substantive portions of this regulation may apply to future engines at the facility.

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. Gallatin 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; the air quality 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 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. Gallatin has a PTE greater than 15 tons per year of particulate matter (PM) and oxides of nitrogen (NO<sub>x</sub>); 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. Gallatin 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. Gallatin submitted an affidavit of publication of public notice for the March 31, 2009, issue of the *Bozeman Daily Chronicle*, a newspaper of general circulation in the Town of Bozeman in Gallatin 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 Gallatin 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 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 Modification--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.

Gallatin is not a major stationary source since 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 per year (tpy) of any pollutant;
  - b. PTE > 10 tpy of any one hazardous air pollutant (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 particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) in a serious PM<sub>10</sub> 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 #2523-03 for Gallatin, 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 one HAP and less than 25 tpy of all HAPs.
- c. This source is not located in a serious PM<sub>10</sub> nonattainment area.
- d. This facility is subject to a current NSPS, 40 CFR 60, Subpart OOO and potentially subject to 40 CFR 60, Subpart IIII.
- e. This facility is potentially subject to area source provisions of 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 Gallatin will be a minor source of emissions as defined under Title V.

### III. BACT Determination

A BACT determination is required for any new or modified source. Gallatin shall install on the new or modified source the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be used.

A BACT analysis was not required for the current permit action because the current permit action is considered an administrative permit action.

### IV. Emission Inventory

<b>CONTROLLED</b> Emission Source	<b>tons/year</b>					
	<b>PM</b>	<b>PM10</b>	<b>NOx</b>	<b>CO</b>	<b>VOC</b>	<b>SO2</b>
430 hp Diesel-fired Engine Generator	4.14	4.14	58.39	12.58	4.74	3.86
230 TPH Jaw Crusher	1.21	0.54	--	--	--	--
230 TPH Cone Crusher	1.21	0.54	--	--	--	--
230 TPH Integrated Screen	2.22	.75	--	--	--	--
Storage Piles	3.32	1.57	--	--	--	--
Haul Roads / Vehicle Traffic	5.68	1.57	--	--	--	--
Conveyor Transfer Points	0.56	0.19	--	--	--	--
<b>Total Emissions</b>	<b>18.34</b>	<b>9.30</b>	<b>58.39</b>	<b>12.58</b>	<b>4.74</b>	<b>3.86</b>

#### Integrated Screen

Maximum Process Rate = 230 ton/hr (Maximum plant process rate)

Maximum Hours of Operation = 8,760 hrs/yr

Number of Screens = 1 screen(s) (using max plant rate with 3 screens in operation)

**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% put in controlled factor and 0% control efficiency

Calculation:  $(230 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.0022 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ screen(s)}) = 2.22 \text{ ton/yr}$

Calculation:  $(230 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.0022 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ screen(s)}) * (1 - 0/100) = \mathbf{2.22 \text{ ton/yr}}$

**Total PM<sub>10</sub> 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:  $(230 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00074 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ screen(s)}) = 0.75 \text{ ton/yr}$

Calculation:  $(230 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00074 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ screen(s)}) * (1 - 0/100) = \mathbf{0.75 \text{ ton/yr}}$

**Crushing [Cone Crusher] (SCC 3-05-020-05)**

Maximum Process Rate = 230 ton/hr (Maximum plant process rate)

Maximum Hours of Operation = 8,760 hrs/yr

**PM Emissions:**

Emission Factor = 0.0012 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04)

Calculation:  $(230 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.0012 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 1.21 \text{ ton/yr}$

Calculation:  $(230 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.0012 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 - 0/100) = \mathbf{1.21 \text{ ton/yr}}$

**PM<sub>10</sub> Emissions:**

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

Calculation:  $(230 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00054 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = \mathbf{0.54 \text{ ton/yr}}$

**Crushing [Jaw Crusher] (SCC 3-05-020-05)**

Maximum Process Rate = 230 ton/hr (Application information)

Maximum Hours of Operation = 8,760 hrs/yr

**PM Emissions:**

Emission Factor = 0.0012 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04)

Calculation:  $(230 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.0012 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 - 0/100) = \mathbf{1.21 \text{ ton/yr}}$

**PM<sub>10</sub> Emissions:**

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

Calculation:  $(230 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00054 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 - 0/100) = \mathbf{0.54 \text{ ton/yr}}$

**Conveyor Transfer Point (SCC 3-05-020-06)**

Maximum Process Rate = 230 ton/hr (Maximum plant process rate)

Maximum Hours of Operation = 8,760 hrs/yr

Number of Transfers = 4 transfer (Company Information)

**Total PM Emissions:**

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

Calculation:  $(230 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00014 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (4 \text{ transfer}) * (1 - 0/100) = \mathbf{0.56 \text{ ton/yr}}$

**Total PM<sub>10</sub> Emissions:**

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

Calculation:  $(230 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.000046 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (4 \text{ transfer}) * (1 - 0/100) = \mathbf{0.19 \text{ ton/yr}}$

## **Storage Piles**

Maximum Process Rate = 230 ton/hr (Maximum plant process rate)

Maximum Hours of Operation = 8,760 hrs/yr

Number of Piles = 2 piles

### **PM Emissions:**

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

Emission Factor =  $k (0.0032) * (U/5)^{1.3} * (M / 2)^{-1.4} = 0.00330 \text{ lb/ton}$

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 = 8.2 mph (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06)

$M$  = material moisture content = 2.5% (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06)

Control Efficiency = 50% (Water or chemical spray)

Calculation:  $(230 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00330 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (2 \text{ piles}) = 6.64 \text{ ton/yr}$

Calculation:  $(230 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00330 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (2 \text{ piles}) * (1 - 50/100) = \mathbf{3.32 \text{ ton/yr}}$

### **PM<sub>10</sub> 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 = 8.2 mph (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06)

$M$  = material moisture content = 2.5% (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06)

Control Efficiency = 50% (Water or chemical spray)

Calculation:  $(230 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00156 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (2 \text{ piles}) = 3.14 \text{ ton/yr}$

Calculation:  $(230 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00156 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (2 \text{ piles}) * (1 - 50/100) = \mathbf{1.57 \text{ ton/yr}}$

## **Haul Roads**

Vehicle Miles Traveled (VMT) per Day = 5 VMT/day (Estimate)

VMT per hour =  $(5 \text{ VMT/day}) * (\text{day}/24 \text{ hrs}) = 0.21 \text{ VMT/hr}$

Hours of Operation = 8,760 hrs/yr

### **PM Emissions:**

Predictive equation for emission factor for unpaved roads at industrial sites provided per AP 42, Ch. 13.2.2, 11/06.

Emission Factor =  $k * (s / 12)^a * (W / 3)^b = 12.46 \text{ lb/VMT}$

Where:  $k$  = constant = 4.9 lbs/VMT (Value for PM<sub>30</sub>/TSP, AP 42, Table 13.2.2-2, 11/06)

$s$  = surface silt content = 7.1 % (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06)

$W$  = mean vehicle weight = 54 tons (1994 average loaded/unloaded or a 40 ton truck)

$a$  = constant = 0.7 (Value for PM<sub>30</sub>/TSP, AP 42, Table 13.2.2-2, 11/06)

$b$  = constant = 0.45 (Value for PM<sub>30</sub>/TSP, AP 42, Table 13.2.2-2, 11/06)

Control Efficiency = 50% (Water spray or chemical dust suppressant)

Calculation:  $(8760 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (12.46 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) = 11.37 \text{ tons/yr}$  (Uncontrolled Emissions)

Calculation:  $(8760 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (12.46 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) * (1 - 50/100) = \mathbf{5.68 \text{ tons/yr}}$  (Apply 50% control efficiency)

### **PM<sub>10</sub> Emissions:**

Predictive equation for emission factor for unpaved roads at industrial sites provided per AP 42, Ch. 13.2.2, 11/06.

Emission Factor =  $k * (s / 12)^a * (W / 3)^b = 3.43 \text{ lb/VMT}$

Where:  $k$  = constant = 1.5 lbs/VMT (Value for PM<sub>10</sub>, AP 42, Table 13.2.2-2, 11/06)

$s$  = surface silt content = 7.1 % (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06)

$W$  = mean vehicle weight = 54 tons (1994 average loaded/unloaded or a 40 ton truck)

$a$  = constant = 0.9 (Value for PM<sub>10</sub>, AP 42, Table 13.2.2-2, 11/06)

$b$  = constant = 0.45 (Value for PM<sub>10</sub>, AP 42, Table 13.2.2-2, 11/06)

Control Efficiency = 50% (Water spray or chemical dust suppressant)

Calculation:  $(8760 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (3.43 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) = 3.13 \text{ tons/yr}$  (Uncontrolled Emissions)

Calculation:  $(8760 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (3.43 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) * (1-50/100) = \mathbf{1.57 \text{ tons/yr}}$  (Apply 50% control efficiency)

### **Diesel-fired Engine Generator**

Note: Emissions are based on the power output of the engine (430 hp).

Operational Capacity of Engine = 430 hp

Hours of Operation = 8,760 hours

#### **PM Emissions:**

PM Emissions = **4.14 ton/yr** (Assume PM = PM10)

PM Emissions = 8,286.96 lbs/yr (Assume PM = PM10)

#### **PM<sub>10</sub> Emissions:**

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

Calculation:  $(8,760 \text{ hours}) * (430 \text{ hp}) * (0.0022 \text{ lbs/hp-hr}) * (\text{ton}/2000 \text{ lb}) = \mathbf{4.14 \text{ ton/yr}}$

#### **NO<sub>x</sub> Emissions:**

Emission Factor = 0.031 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)

Calculation:  $(8,760 \text{ hours}) * (430 \text{ hp}) * (0.031 \text{ lbs/hp-hr}) * (\text{ton}/2000 \text{ lb}) = \mathbf{58.39 \text{ ton/yr}}$

#### **CO Emissions:**

Emission Factor = 0.00668 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)

Calculation:  $(8,760 \text{ hours}) * (430 \text{ hp}) * (0.00668 \text{ lbs/hp-hr}) * (\text{ton}/2000 \text{ lb}) = \mathbf{12.58 \text{ ton/yr}}$

#### **VOC Emissions:**

Emission Factor = 0.0025141 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, TOC, Exhaust & Crankcase, 10/96)

Calculation:  $(8,760 \text{ hours}) * (430 \text{ hp}) * (0.0025141 \text{ lbs/hp-hr}) * (\text{ton}/2000 \text{ lb}) = \mathbf{4.74 \text{ ton/yr}}$

#### **SO<sub>x</sub> Emissions:**

Emission Factor = 0.00205 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)

Calculation:  $(8,760 \text{ hours}) * (430 \text{ hp}) * (0.00205 \text{ lbs/hp-hr}) * (\text{ton}/2000 \text{ lb}) = \mathbf{3.861 \text{ ton/yr}}$

## V. Existing Air Quality

MAQP #2523-03 is issued for the operation of a portable aggregate crushing/screening facility to be initially located in the Southeast ¼ of Section 35, Township 1 South, Range 4 East, in Gallatin County, 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 kilometers (km) of certain PM<sub>10</sub> nonattainment areas. *A Missoula County air quality permit would be required for locations within Missoula County, Montana.* Gallatin will be required to obtain an addendum to this air quality permit to operate at locations in or within 10 km of certain PM<sub>10</sub> nonattainment areas.

## VI. Air Quality Impacts

The Department determined that there will be no negative impacts from this permitting action because this permitting action is considered an administrative action. Furthermore, the Department believes that the amount of emissions generated by this project will not exceed any set ambient standard.



VII. Ambient Air Impact Analysis

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.

VIII. 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?
	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.

IX. Environmental Assessment

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

Permit Analysis Prepared by: T. Love  
Date: May 22, 2012