



Montana Department of  
**E**NVIRONMENTAL **Q**UALITY

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July 24, 2009

Mr. James Dinsmore  
Hall Sand and Gravel  
333 Lower Willow Creek Rd  
Hall, MT 59837

Dear Mr. Dinsmore:

Montana Air Quality Permit #2971-01 is deemed final as of July 24, 2009, by the Department of Environmental Quality (Department). This permit is for a crushing and screening operation. 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,

Vickie Walsh  
Air Permitting Program Supervisor  
Air Resources Management Bureau  
(406) 444-9741

Shawn Juers  
Environmental Engineer  
Air Resources Management Bureau  
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VW:SJ  
Enclosure

Montana Department of Environmental Quality  
Permitting and Compliance Division

Montana Air Quality Permit #2971-01

Hall Sand and Gravel  
333 Lower Willow Creek Rd  
Hall, MT 59837

July 24, 2009



## MONTANA AIR QUALITY PERMIT

Issued To: Hall Sand and Gravel  
333 Lower Willow Creek Rd  
Hall, MT 59837

Montana Air Quality Permit #2971-01  
Administrative Amendment (AA) Request  
Received: 6/16/09  
Department Decision on AA: 7/8/2009  
Permit Final: 7/24/2009  
AFS #: 777-2971

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Hall Sand and Gravel (Hall) 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

Hall operates a crushing and screening operation in the NW¼ of Section 25, Township 10 North, Range 13 West in Granite County, Montana. However, MAQP #2971-01 would apply 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

The Department received a letter on June 16, 2009, from Hall requesting changes to MAQP #2971-00 to remove the 1948 Lippman Jaw Crusher, the 1948 Rolls Crusher, and the 300 horsepower (hp) Cummins diesel generator, and to add a single impact crusher. This permitting action incorporates the changes requested. In addition, the emissions inventory has been updated to reflect the equipment changes and to update the emissions factors used, and updates made to reflect the current permit language, format, and rule references used by the Department.

### SECTION II: Conditions and Limitations

#### A. Emission Limitations

1. Hall shall not cause or authorize to be discharged from any non-New Source Performance Standards (NSPS) affected equipment an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).
2. Water and spray bars shall be available on site at all times and operated as necessary to maintain compliance with the opacity limitation in Sections II.A.1 (ARM 17.8.752).
3. Hall 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).

4. Hall 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.3 (ARM 17.8.749).
5. Hall shall not operate more than one crusher at any given time and the maximum rated capacity of the crusher shall not exceed 100 tons per hour (TPH) (ARM 17.8.749).
6. Hall shall not operate more than one screen at any given time and the maximum rated capacity of the screen shall not exceed 100 TPH (ARM 17.8.749).
7. If the permitted equipment is used in conjunction with any other equipment owned or operated by Hall, 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).

B. Testing Requirements

1. The Department may require testing (ARM 17.8.105).
2. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

C. Operational Reporting Requirements

1. If this portable crushing and screening facility 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 17.8.765).
2. Hall shall maintain on-site records showing daily hours of operation and daily production rates for the last 12 months. All records compiled in accordance with this permit shall be maintained by Hall as a permanent business record for at least 5 years following the date of the measurement, must be submitted to the Department upon request, and must be available at the site for inspection by the Department (ARM 17.8.749).
3. Hall shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the emission inventory contained in the permit analysis and all sources of emissions identified in the most recent emission inventory report.

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).

4. Hall 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).

### SECTION III: General Conditions

- A. Inspection – Hall 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 Systems (CEMS) or Continuous Emissions Rate Monitoring Systems (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 Hall fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Hall 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. Permit Fee – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by Hall 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. Hall 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.

Permit Analysis  
Hall Sand and Gravel  
Montana Air Quality Permit (MAQP) #2971-01

I. Introduction/Process Description

A. Permitted Equipment

Hall Sand and Gravel (Hall) operates a portable crushing and screening plant consisting of the following equipment:

- One 2006 38x42 Trio Impact Crusher (maximum capacity of 100 tons per hour (TPH))
- One 1960's separating screen (home built, maximum capacity of 100 TPH)
- Five 1960's home built conveyors
- One 1965 hopper with plate feeder and conveyor (home built)
- Associated equipment

B. Source Description

Hall operates this crushing and screening plant, using the equipment described above, to crush rock and sort materials for use in construction operations.

C. Permit History

MAQP #2971-00 was issued to Hall on November 10, 1996, to operate a portable 1948 Rolls Crusher, a 1948 Lippman Jaw Crusher, a home-built 1965 hopper with plate feeder and conveyor; five 1960's home-built conveyors, a home-built 1960's separating screen, a 1950's Cummins diesel generator (300 HP), and associated equipment.

D. Current Permit Action

The Department of Environmental Quality (Department) received a letter on June 16, 2009, from Hall requesting changes to MAQP #2971-00 to remove the 1948 Lippman Jaw Crusher, the 1948 Rolls Crusher, and the 300 horse-power (hp) Cummins diesel generator, and to add a single impact crusher. This permitting action incorporates the changes requested. In addition, the emissions inventory has been updated to reflect the equipment changes and to update the emissions factors used, and updates made to reflect the current permit language, format, and rule references used by the Department. MAQP #2971-01 replaces MAQP 2971-00.

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).

Hall 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 17.8.221 Ambient Air Quality Standard for Visibility
6. ARM 17.8.223 Ambient Air Quality Standard for PM<sub>10</sub>

Hall 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 be taken to control emissions of airborne particulate matter. (2) Under this rule, Hall 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 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.
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 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank truck or trailer is equipped with a vapor loss control device as described in (1) of this rule.
7. ARM 17.8.340 Standard of Performance for New Stationary Sources. This rule incorporates, by reference, 40 Code of Federal Regulations (CFR) Part 60, Standards of Performance for New Stationary Sources (NSPS). Hall is not considered an NSPS affected facility pursuant to 40 CFR Part 60 because the maximum rated capacity is below the threshold of 150 tons per hour (TPH). MAQP #2971-01 requires that the maximum throughput remain below 100 TPH.

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. Because this permitting action was considered an administrative action pursuant to ARM 17.8.764, no fee was required.
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 a Montana 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 (TPY) of any pollutant. Hall has a PTE greater than 15 TPY of particulate matter (PM); therefore, a Montana 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. A permit application was not required for the current permit action because the permit change is considered an administrative permit change. (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. An affidavit of publication of public notice was not required for the current permit action because the permit change is considered an administrative permit change.
  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 Hall 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. A Montana 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. A Montana 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. A Montana 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 a Montana 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 a Montana 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.

This facility is not a major stationary source because it is not a listed source and the facility's PTE is less than 250 TPY 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 TPY of any pollutant;

- b. PTE > 10 TPY of any one hazardous air pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; 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 #2971-01 for Hall, 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 tons/year of all HAPs.
  - c. This source is not located in a serious PM<sub>10</sub> nonattainment area.
  - d. This facility is not subject to NSPS.
  - e. This facility is not subject to any current NESHAP standards.
  - f. This source is not a Title IV affected source or a solid waste combustion unit.
  - g. This source is not an EPA designated Title V source.

Based on these facts, the Department determined that this facility is not subject to the Title V Operating Permit Program.

### III. BACT Determination

A BACT determination is required for each new or modified source. Hall shall install on the new or modified source the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized. A BACT determination was not required for the current permit action because the permit change is considered an administrative permit change.

IV. Emission Inventory

**Hall Sand and Gravel**  
**Emissions Inventory - Controlled**

Source	Tons/Year	
	PM	PM-10
2006 38x42 Trio Impact Crusher	0.53	0.24
Transfer Operations (4 transfers)	0.25	0.08
Pile Forming (2 piles formed)	10.42	4.91
Bulk Loading (2)	6.48	3.07
Screen	1.58	0.96
<b>Total :</b>	<b>17.68</b>	<b>8.30</b>

**CRUSHERS - (SCC 3-050030-03, controlled)**

**2006 38x42 Trio Compact Crusher**

Process Rate: 100.0000 tons/hr  
 Hours of operation: 8760.0000 hr/yr or 24 hr/day

PM Emissions (controlled):

Emission Factor: 0.0012 lbs/ton (AP-42 Table 11.19.2-2 8/2004)  
 Calculations: 0.0012 lbs/ton \* 100 tons/hr = 0.120 lbs/hr  
 0.12 lbs/hr \* 8760 hr/yr \* 0.0005 ton/lb = **0.526 tons/yr**

PM-10 Emissions (controlled):

Emission Factor: 0.00054 lbs/ton (AP-42 Table 11.19.2-2, 8/2004)  
 Calculations: 0.00054 lbs/ton \* 100 tons/hr = 0.054 lbs/hr  
 0.054 lbs/hr \* 8760 hr/yr \* 0.0005 ton/lb = **0.237 tons/yr**

**Material Transfer - (SCC 3-05-020-06, controlled)**

**Material Transfer (4 transfers)**

Process Rate: 100.0000 tons/hr  
 Number of Transfers 4.0000 Transfers  
 Hours of operation: 8760.0000 hr/yr or 24 hr/day

PM Emissions:

Emission Factor: 0.000140 lbs/ton (AP-42 Table 11.19.2-2, 8/2004)  
 Calculations: 0.00014 lbs/ton \* 100 tons/hr \* 4 Transfers = 0.056 lbs/hr  
 0.056 lbs/hr \* 8760 hr/yr \* 0.0005 ton/lb = **0.245 tons/yr**

PM-10 Emissions:

Emission Factor: 0.000046 lbs/ton (AP-42 Table 11.19.2-2, 8/2004)  
 Calculations: 0.000046 lbs/ton \* 100 tons/hr \* 4 Transfers = 0.018 lbs/hr  
 0.018 lbs/hr \* 8760 hr/yr \* 0.0005 ton/lb = **0.079 tons/yr**

### Tile Forming (2 Piles)

Process Rate: 100.0000 tons/hr  
 Hours of operation: 8760.0000 hr/yr or 24 hr/day

#### PM Emissions:

$$E = k(0.0032) \frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}} \text{ (pound [lb]/ton)}$$

where:

AP-42

E = emission factor  
 k = particle size multiplier (dimensionless)  
 U = mean wind speed, meters per second (m/s) (miles per hour [mph])  
 M = material moisture content (%)

k = 0.74 for PM  
 k = 0.35 for PM10  
 M = 1.10 %  
 U = 9.10 MPH

moisture content for stone processing (AP-42 Table 13.2.4-1, 11/2006)  
 statewide average : <http://met-www.cit.cornell.edu/ccd/wndspd98.html>

PM E = 0.0119 lbs/ton  
 PM10 E = 0.0056 lbs/ton

#### PM Emissions:

Emission Factor: 0.0119 lbs/ton (AP 42 13.2.4, 11/06)  
 Calculations: 0.0119 lbs/ton \* 100 tons/hr \* 2 = 2.380 lbs/hr  
 2.38 lbs/hr \* 8760 hr/yr \* 0.0005 tons/lb = 10.424 tons/yr

#### PM-10 Emissions:

Emission Factor: 0.0056 lbs/ton (AP 42 13.2.4, 11/06)  
 Calculations: 0.0056 lbs/ton \* 100 tons/hr \* 2 = 1.120 lbs/hr  
 1.12 lbs/hr \* 8760 hr/yr \* 0.0005 tons/lb = 4.906 tons/yr

### Bulk Loading (2)

Process Rate 100.0000 tons/hr  
 Hours of operation: 8760.0000 hr/yr

#### PM Emissions:

Emission Factor: 0.0074 lbs/ton (AP 42 13.2.4, 11/06)  
 Calculations: 0.0074 lbs/ton \* 100 tons/hr \* 2 = 1.480 lbs/hr  
 1.48 \* 8760 hr/yr \* 0.0005 tons/lb = 6.482 TPY

#### PM10 Emissions:

Emission Factor: 0.0035 lbs/ton (AP 42 13.2.4, 11/06)  
 Calculations: 0.0035 lbs/ton \* 100 tons/hr \* 50% = 0.700 lbs/hr  
 0.7 lbs/hr \* 8760 hr/yr \* 0.0005 tons/lb = 3.066 tons/yr

**Screens - (SCC 3-05-020-02, 03 - Controlled)**

Process Rate: 100.0000 tons/hr  
Hours of Operation: 8760.0000 hrs

PM Emissions

Emissions Factor: 0.0036 lb/ton (AP-42 Table 11.19.2-2, 8/2004)  
Calculations: 0.0036 lb/ton \* 100 tons/hr = 0.3600 lb/hr  
0.36 lb/hr \* 8760 hr \* 0.0005 lb/ton = **1.5768** tons/yr

PM-10 Emissions

Emissions Factor: 0.0022 lb/ton (AP-42 Table 11.19.2-2, 8/2004)  
Calculations: 0.0022 lb/ton \* 100 tons/hr = 0.2200 lb/hr  
0.22 lb/hr \* 8760 hrs \* 0.0005 lb/ton = **0.9636** tons/yr

V. Air Quality Impacts

MAQP #2971-01 is issued for the operation of a portable crushing and screening plant. MAQP #2971-01 will cover the plant while operating at any location within Montana, excluding those counties that have a Department approved permitting program. In the view of the Department, the amount of controlled emissions generated by this facility will not exceed any set ambient standard. In addition, this source is portable and any air quality impacts will be minimal and temporary. 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.

VI. 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.

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	
xx		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	xx	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	xx	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	xx	4. Does the action deprive the owner of all economically viable uses of the property?
	xx	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?
	xx	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	xx	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?
	xx	7a. Is the impact of government action direct, peculiar, and significant?
	xx	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	xx	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?
	xx	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

An environmental assessment was not required for the current permit action because it is considered an administrative action.

Analysis Prepared By: Shawn Juers  
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