



Montana Department of
ENVIRONMENTAL QUALITY

Brian Schweitzer, Governor

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November 4, 2011

Dan Hutchings
Valley Sand and Gravel LLC
7510 Applegate Dr.
Helena, MT 59602

Dear Mr. Hutchings:

Montana Air Quality Permit # 3191-04 is deemed final as of November 4, 2011, by the Department of Environmental Quality (Department). This permit is for Valley Sand and Gravel LLC – Portable 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

Stephen Coe, P.E.
Environmental Engineer
Air Resources Management Bureau
(406) 444-5272

VW: SC
Enclosures

Montana Department of Environmental Quality
Permitting and Compliance Division

Montana Air Quality Permit #3191-04

Valley Sand and Gravel LLC
7510 Applegate Dr.
Helena, MT 59602

November 4, 2011



MONTANA AIR QUALITY PERMIT

Issued To: Valley Sand and Gravel, LLC
7510 Applegate Drive
Helena, MT 59602

Montana Air Quality Permit: #3191-04
Application Complete: September 26, 2011
Preliminary Determination Issued : September 30, 2011
Department's Decision Issued : October 19, 2011
Permit Final: November 4, 2011
AFS #: 777-3191

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

VSG operates a portable gravel screening facility, which operates at various locations throughout Montana. However, MAQP #3191-04 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 (PM₁₀) nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* The home pit location for this facility is in the SE¼ of Section 13, Township 11 North, Range 4 West, in Lewis and Clark County. An addendum will be required for locations in or within 10 kilometers (km) of certain PM₁₀ nonattainment areas.

B. Current Permit Action

On September 26, 2011, VSG submitted a complete permit application to the Department for the addition of a new combined crushing and screening unit with a 200 Ton per Hour (TPH) capacity. The Department incorporated the new equipment into the permit.

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 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO):
 - For crushers that commence construction, modification, or reconstruction on or after April 22, 2008: 12% opacity
 - For crushers that commence construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008: 15% opacity
2. All visible emissions from any other NSPS-affected equipment (such as screens and conveyors) shall not exhibit an opacity in excess of the following averaged over six consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO):
 - For equipment that commence construction, modification, or reconstruction on or after April 22, 2008: 7% opacity

- For 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 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 17.8.752).
 5. VSG 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. VSG 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. VSG shall not operate more than five (5) screens at any given time and the total combined maximum rated design capacity of the screens shall not exceed 735 TPH (ARM 17.8.749).
 8. VSG shall not operate more than one (1) crusher at any given time with maximum rated design capacity of the crusher shall not exceed 200 TPH (ARM 17.8.749).
 9. If the permitted equipment is used in conjunction with any other equipment owned or operated by VSG, 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).
 10. VSG 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).
 11. VSG shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 Code of Federal Regulations (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). Additional testing may be required by 40 CFR 60, Subpart OOO (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 equipment 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. VSG 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. VSG 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. VSG 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 VSG 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

VSG shall provide the Department with written notification of the actual start-up date of the new 200 TPH combined screening and crushing unit within 15 days after the actual start-up date (ARM 17.8.749).

SECTION III: General Conditions

- A. Inspection – VSG shall allow 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 VSG fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving VSG 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 VSG 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. VSG 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
Valley Sand and Gravel, LLC
MAQP #3191-04

I. Introduction/Process Description

Valley Sand and Gravel, LLC (VSG) owns and operates a portable gravel crushing and screening facility.

A. Permitted Equipment

- One combined crusher/screen with a maximum rated design capacity not to exceed 200 TPH
- One screen with a maximum rated design capacity not to exceed 200 tons per hour (TPH)
- One screen with a maximum rated design capacity not to exceed 60 TPH powered by a 48-brake-horsepower (bhp) diesel engine
- One screen with a maximum rated design capacity not to exceed 175 TPH
- One screen with a maximum rated design capacity not to exceed 100 TPH
- Conveyors, stackers, and other material handling equipment

B. Source Description

VSG's home pit is located at the SE¼ of Section 13, Township 11 North, Range 4 West, in Lewis and Clark County, Montana. For a typical operational setup, unprocessed materials are loaded into the feed hopper by a front-end loader or a similar piece of equipment. The hopper deposits the material to the screen, which separates and sizes the aggregate materials. Alternately the material can be placed into a hopper and crushed then screened to separate the aggregate material. The aggregate materials are then conveyed to another screen, where the process is repeated, until the desired product is separated. Material is then conveyed to stockpile, for sale and use in various construction operations.

C. Permit History

On June 25, 2002, VSG was issued **MAQP #3191-00** to operate a portable 1996 Exatec 2-deck screen plant (maximum capacity 175 TPH) and associated equipment.

On February 11, 2004, VSG submitted a complete permit application for the addition of screening units containing a 1993 EL Russ 2-deck (4'x8') screen plant (maximum capacity 200 TPH), a 1985 Fab Tec 2-deck (4'x8') screen plant (maximum capacity 60 TPH), a 1998 Armadillo screen plant (maximum capacity 100 TPH), a 36-kilowatt (kW) diesel engine, a 72-kW diesel engine, a 435-kW diesel engine, and associated equipment to the existing screening operation. The Department of Environmental Quality (Department) incorporated the new equipment into the permit with the current permit action. In addition, the permit was updated to reflect the current language and rule references used by the Department. **MAQP #3191-01** replaced MAQP #3191-00.

On October 13, 2004, VSG submitted a request to generalize MAQP #3191-01. This administrative amendment (AA) allowed VSG to have additional operational flexibility in operating their equipment. In addition, the permit was updated to reflect the current language and rule references used by the Department. **MAQP #3191-02** replaced MAQP #3191-01.

On October 6, 2006, VSG sent notification that their mailing address had been changed to 7510 Applegate Drive, Helena, MT 59602.

On July 12, 2010, VSG submitted a letter to the Department with corrections to the permitted equipment list. This AA was to reflect that the 72-kW diesel engine that provided the direct drive for a screen has been removed. A 435-kW diesel generator engine had been associated with MAQP #3191-01; however, it had also been listed in another MAQP held by VSG. Therefore, it was removed from the list of permitted equipment in **MAQP #3191-03**. MAQP #3191-03 was also updated to reflect current permit language and rule references used by the Department. **MAQP #3191-03** replaced MAQP #3191-02.

D. Current Permit Action

On September 26, 2011, VSG submitted a complete permit application to the Department for the addition of a new combined crushing and screening unit with a 200 TPH capacity. The Department incorporated the new equipment into the permit. **MAQP #3191-04** replaces MAQP #3191-03.

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).

VSG 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 (SO₂)
2. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide (NO₂)
3. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide (CO)
4. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter (PM)
5. ARM 17.8.221 Ambient Air Quality Standard for Visibility
6. ARM 17.8.223 Ambient Air Quality Standard for PM with an Aerodynamic Diameter of 10 Microns or Less (PM₁₀)

VSG 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, VSG 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 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). VSG 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 plant to be subject to this subpart, the facility must meet the definition of an affected facility, the plant must have above-ground crushers, and the affected equipment must have been constructed, reconstructed, or modified after August 31, 1983. Based on the information submitted by VSG, the portable crushing equipment to be used under MAQP #3191-04 is subject to this subpart because the crusher has a capacity greater than 150 TPH and was constructed or reconstructed 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. Based on the information submitted by VSG, the CI ICE equipment to be used under MAQP #3191-04 is not currently subject to this subpart because it was manufactured prior to the applicable dates. However, this subpart could become applicable if a CI ICE were modified, reconstructed, or added to the MAQP in the future.
8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. This rule incorporates, by reference, 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories. VSG is considered an 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 VSG, the RICE equipment to be used under MAQP #3191-04 is potentially subject to this subpart because it may meet the definition of a stationary RICE operating at an area source of HAPs while within their home pit.

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. VSG 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 (TPY) of any pollutant. VSG has a PTE greater than 15 TPY of PM; 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. VSG 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. VSG submitted an affidavit of publication of public notice for the August 29, 2011 issue of the Helena Independent Record, a newspaper of general circulation in the Town of Helena in Lewis and Clark 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 VSG 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 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 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 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 PM₁₀ in a serious PM₁₀ nonattainment area.
 2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (1) Title V of the FCAA Amendments of 1990 requires that all sources, as defined in ARM 17.8.1204 (1), obtain a Title V Operating Permit. In reviewing and issuing MAQP #3191-04 for VSG, 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 PM₁₀ nonattainment area.
 - d. This facility is subject to current NSPS (40 CFR 60, Subpart OOO)
 - e. This facility is potentially subject to a current NESHAP standard. 40 CFR 63, Subpart A – General Provisions and Subpart ZZZZ – National Emissions Standards for HAPs for Stationary RICE are applicable to any stationary RICE at the facility.
 - 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 VSG will be a minor source of emissions as defined under Title V.

III. BACT Determination

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

VSG is installing a new 200 TPH combined crushing and screening operation, this will increase their screening capacity from 535 TPH to 735 TPH, increase their screens from four (4) to five (5) and add crushing capacity at 200 TPH. This addition requires a BACT determination. 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, VSG may use chemical dust suppressant to assist in controlling particulate emissions.

VSG shall not cause or authorize to be discharged into the atmosphere from any NSPS-affected crusher any visible emissions that exhibit an opacity of 12% or greater averaged over 6 consecutive minutes for crushers that commenced construction, modification, or reconstruction on or after April 22, 2008. Additionally, VSG shall not cause or authorize to be discharged into the atmosphere from any other associated NSPS-affected equipment, such as screens and material conveyors, any visible emissions that exhibit an opacity of 7% or greater averaged over 6 consecutive minutes for equipment that commences construction, modification, or reconstruction after April 22, 2008, and 10% for equipment that commences construction, modification, or reconstruction after August 31, 1983, but before April 22, 2008. Finally, VSG shall not cause or authorize to be discharged into the atmosphere from any crusher, screen, or associated equipment, not subject to NSPS, any visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes

VSG is required to use water spray bars and water and/or chemical dust suppressant, as necessary, to control particulate emissions. Furthermore, VSG is required to comply with 40 CFR 60, Subpart OOO containing opacity limitations. The Department determined that using water spray bars, as proposed by the applicant, to maintain compliance with opacity requirements constitutes BACT for these sources.

IV. Emission Inventory

The emission inventory was updated with current emission factors for crushed stone processing operations, which more accurately estimate the facility emissions.

Emission Source	TPY						
	PM	PM ₁₀	PM _{2.5}	NO _x	CO	VOC	SO _x
Cold Aggregate Storage Piles	5.33	2.51	0.39	--	--	--	--
Cold Aggregate Handling/Conveyors	4.96	1.63	0.46	--	--	--	--
Cold Aggregate Screens	7.08	2.38	0.16	--	--	--	--
Cold Aggregate Crushing	1.05	0.47	0.09				
Haul Roads / Vehicle Traffic	5.68	1.57	0.16	--	--	--	--
Diesel Engine: 48-bhp @ 8760 hours	0.47	0.47	0.47	6.55	1.41	0.53	0.43
Total Emissions	24.57	9.03	1.73	6.55	1.41	0.53	0.43

Notes:

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

NO_x = oxides of nitrogen

VOC = volatile organic compounds

SO_x = oxides of sulfur

hrs/yr = hours per year

CALCULATIONS

Cold Aggregate Storage Piles

Maximum Process Rate = 735 ton/hr (Maximum plant process rate)

Maximum Hours of Operation = 8,760 hrs/yr

Number of Piles = 1 piles

PM Emissions:

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

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

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

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

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

Control Efficiency = 50% (Water or chemical spray)

Calculation: $(735 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00331 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ piles}) * (50\%) = 5.33$ TPY

PM₁₀ Emissions:

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

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

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

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

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

Control Efficiency = 50% (Water or chemical spray)

Calculation: $(735 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00156 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ piles}) * (50\%) = 2.51$ TPY

PM_{2.5} Emissions:

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

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

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

Cold Aggregate Storage Piles

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

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

Control Efficiency = 50% (Water or chemical spray)

Calculation: $(735 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00024 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ piles}) * (50\%) = 0.39 \text{ TPY}$

Conveyor Transfer Point

Maximum Process Rate = 735 ton/hr

Maximum Hours of Operation = 8,760 hrs/yr

Number of Transfers = 11 transfer

PM Emissions:

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

Calculation: $(735 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00014 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (11 \text{ transfer}) * (50\%) = 4.96 \text{ TPY}$

PM₁₀ Emissions:

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

Calculation: $(735 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.000046 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (11 \text{ transfer}) * (50\%) = 1.63 \text{ TPY}$

PM_{2.5} Emissions:

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

Calculation: $(735 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.000013 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (11 \text{ transfer}) = 0.46 \text{ TPY}$

Screening

Maximum Process Rate = 735 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 5 screens in operation)

PM Emissions:

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

Calculation: $(735 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.0022 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ screen(s)}) * (50\%) = 7.08 \text{ TPY}$

PM₁₀ Emissions:

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

Calculation: $(735 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00074 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ screen(s)}) * (50\%) = 2.38 \text{ TPY}$

PM_{2.5} Emissions:

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

Calculation: $(735 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00005 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ screen(s)}) = 0.16 \text{ TPY}$

Crushing

Maximum Process Rate = 200 ton/hr (Maximum crushing plant process rate)

Maximum Hours of Operation = 8,760 hrs/yr

Number of Crushers = 1

Total PM Emissions:

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

Calculation: $(200 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.0012 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (50\%) = 1.05 \text{ TPY}$

Total PM₁₀ Emissions:

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

Calculation: $(200 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00054 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (50\%) = 0.47 \text{ TPY}$

Total PM_{2.5} Emissions:

Emission Factor = 0.00010 lb/ton (0.00010 tertiary crushing controlled, AP 42, Table 11.19.2-2, 8/04)

Calculation: $(200 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00010 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.09 \text{ TPY}$

Diesel Engine: 48-bhp (36-kW)

Operational Capacity of Engine = 48 hp (1-kW = 1.341 hp)

Hours of Operation = 8,760 hours

Total PM/PM₁₀/PM_{2.5} Emissions:

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

Calculation: $(8,760 \text{ hours}) * (48 \text{ hp}) * (0.0022 \text{ lbs/hp-hr}) * (\text{ton}/2000 \text{ lb}) = 0.47 \text{ TPY}$

NO_x Emissions:

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

Calculation: $(8,760 \text{ hours}) * (48 \text{ hp}) * (0.031 \text{ lbs/hp-hr}) * (\text{ton}/2000 \text{ lb}) = 6.55 \text{ TPY}$

CO Emissions:

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

Calculation: $(8,760 \text{ hours}) * (48 \text{ hp}) * (0.00668 \text{ lbs/hp-hr}) * (\text{ton}/2000 \text{ lb}) = 1.41 \text{ TPY}$

Calculation: $(8,760 \text{ hours}) * (48 \text{ hp}) * (0.00668 \text{ lbs/hp-hr}) = 2,824.96 \text{ lbs/yr}$

VOC Emissions:

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

Calculation: $(8,760 \text{ hours}) * (48 \text{ hp}) * (0.0025141 \text{ lbs/hp-hr}) * (\text{ton}/2000 \text{ lb}) = 0.53 \text{ TPY}$

SO_x Emissions:

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

Calculation: $(8,760 \text{ hours}) * (48 \text{ hp}) * (0.00205 \text{ lbs/hp-hr}) * (\text{ton}/2000 \text{ lb}) = 0.433 \text{ TPY}$

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 PM₃₀/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)

Haul Roads

a = constant = 0.7 (Value for PM₃₀/TSP, AP 42, Table 13.2.2-2, 11/06)

b = constant = 0.45 (Value for PM₃₀/TSP, AP 42, Table 13.2.2-2, 11/06)

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

Calculation: (8760 hrs/yr) * (0.21 VMT/hr) * (12.46 lb/VMT) * (ton/2000 lb) * (50%) = 5.68 TPY

PM₁₀ 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 PM₁₀, 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 PM₁₀, AP 42, Table 13.2.2-2, 11/06)

b = constant = 0.45 (Value for PM₁₀, AP 42, Table 13.2.2-2, 11/06)

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

Calculation: (8760 hrs/yr) * (0.21 VMT/hr) * (3.43 lb/VMT) * (ton/2000 lb) * (50%) = 1.57 TPY

PM_{2.5} Emissions:

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

Emission Factor = $k * (s / 12)^a * (W / 3)^b = 0.34 \text{ lb/VMT}$

Where: k = constant = 0.15 lbs/VMT (Value for PM_{2.5}, 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_{2.5}, AP 42, Table 13.2.2-2, 11/06)

b = constant = 0.45 (Value for PM_{2.5}, AP 42, Table 13.2.2-2, 11/06)

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

Calculation: (8760 hrs/yr) * (0.21 VMT/hr) * (0.34 lb/VMT) * (ton/2000 lb) * (50%) = 0.16 TPY

V. Existing Air Quality

MAQP #3191-04 applies while operating at any location in Montana designated as attainment or unclassified for all National Ambient Air Quality Standards (NAAQS); except those areas having a Department approved permitting program, areas considered tribal lands, or areas in or within certain 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 PM₁₀ nonattainment areas.

VI. Air Quality Impacts

MAQP #3191-04 covers operation of this portable gravel screening facility while operating in areas within Montana that are classified as being in attainment with federal ambient air quality standards and areas not yet classified, excluding counties that have a Department-approved permitting program and areas that are tribal lands. This permit contains conditions and limitations that would protect air quality for the site and surrounding area, and that would limit the facility's emissions below the major source threshold. Based on the information provided, the amount of controlled emissions generated by this facility will not exceed any ambient air quality standard.

VII. Ambient Air Impact Analysis

This permitting action is considered an administrative permitting action with no increases in potential emissions; therefore, the Department did not conduct an ambient air impact analysis.

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

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: Valley Sand and Gravel LLC.
7510 Applegate Drive
Helena, MT 59602

Air Quality Permit Number: 3191-04

Preliminary Determination Issued: September 30, 2011

Department Decision Issue: October 19, 2011

Permit Final: November 4, 2011

1. *Legal Description of Site:* Valley Sand and Gravel LLC (VSG) operates a portable crushing and screening plant with a home pit location in the SE¼ of Section 13, Township 11 North, Range 4 West, in Lewis and Clark County, Montana. However, MAQP #3191-04 applies while operating at any location in Montana, except within those areas having a Department approved permitting program, those areas considered tribal lands, or those areas in or within 10 kilometers (km) of certain PM₁₀ nonattainment areas. An addendum to this air quality permit will be required if VSG intends to locate in or within 10 km of certain PM₁₀ nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County.*
2. *Description of Project:* VSG proposes to add a combined crushing and screening unit with a 200 TPH capacity to MAQP #3191-04 and use this unit to crush, screen and sort sand and gravel materials for use in various construction operations. For a typical operational setup, unprocessed materials are loaded into the feed hopper by a front-end loader or a similar piece of equipment. The hopper deposits the material to the crusher which then conveys the material to the screen, which separates and sizes the aggregate materials. The aggregate materials are then conveyed to another screen, where the process is repeated, until the desired product is separated. Material is then conveyed to stockpile, for sale and use in various construction operations.
3. *Objectives of the Project:* VSG submitted a complete permit application for a crushing and screening operation. The proposed new equipment is intended to increase capacity and capability for supplying construction projects.
4. *Additional Project Site Information:* In many cases, the crushing and screening plant may move to a general site location, or open cut pit, which has been previously permitted through the Industrial and Energy Minerals Bureau (IEMB). If this were the case, a more extensive EA for the site would have been conducted and would be found in the Mined Land Reclamation Permit for that specific site.
5. *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 VSG demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the "no-action" alternative was eliminated from further consideration.
6. *A Listing of Mitigation, Stipulations, and Other Controls:* A list of enforceable conditions, including a BACT analysis, would be contained in MAQP #3191-04.

7. *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 would be reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and would not unduly restrict private property rights.
8. *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 Resource			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

Terrestrials would use the same area as the crushing and screening operations. Impacts on terrestrials and aquatic life could result from storm water runoff and pollutant deposition, but such impacts would be minor, as the crushing and screening operations would be considered a minor source of emissions and would have intermittent and seasonal operations. Furthermore, the air emissions would have only minor effects on terrestrial and aquatic life because facility emissions would be well dispersed in the area of operation (See Section 8.F). Also, the nearest water body (an irrigation canal is over 500 meters away) from the proposed operation. At such distances, only minor and temporary effects to terrestrial and aquatic life would be expected from the proposed crushing and screening operation because only minor amounts of pollutants would reach the water body. Therefore, due the minor amount of emissions generated and the dispersion of pollutant emissions, only minor and temporary effects and aquatic life and habitat would be expected from the proposed crushing and screening operation.

B. Water Quality, Quantity, and Distribution

Water would be required for dust suppression on the surrounding roadways and areas of operation and for pollution control for equipment operations. However, water use would only cause a minor surface disturbance to this proposed operational site, since only minor amounts of water would be required to be used for pollution control. Therefore, at most, only minor surface and groundwater quality impacts would be expected as a result of using water for dust suppression because only small amounts of water would be required and deposition of air pollutants upon surrounding water bodies would be minor (See Section 8.F).

C. Geology and Soil Quality, Stability, and Moisture

The crushing and screening operations would only have minor impacts on geology and soil quality, stability, and moisture because the crushing and screening facility would generally locate within a previously disturbed open-cut pit. The deposition of air pollutants on soils would be minor (See Section 8.F) because operations would be seasonal and intermittent, relatively small amounts of pollution would be generated, and air pollutant dispersion would greatly minimize the impacts from the pollution on the surrounding soils. Facility construction, aggregate mining, and traffic operating within the site may cause soil compaction that could impact water infiltration and surface water runoff at the site. However, such impacts would be minor and would only have minor effects upon soils (geology and soil quality, stability, and moisture) and water resources (water quality, quantity, and distribution) at the site.

D. Vegetation Cover, Quantity, and Quality

Minor, if any impacts would occur on vegetative cover, quality, and quantity because the facility would operate at a site where vegetation has been previously removed/disturbed. The facility would be a relatively minor source of emissions and the pollutants would be greatly dispersed (See Section 8.F); therefore, deposition on vegetation from the proposed project would be minor. Also, because the water usage would be minimal (See Section 8.B) and the associated soil disturbance from the application of water and any runoff would be minimal (See Section 8.C), corresponding vegetative impacts would be minor.

E. Aesthetics

The crushing and screening operation would be visible and would create additional noise while operating in the initial proposed site location. However, MAQP #3191-04 would include conditions limiting the opacity of the plant, as well as conditions requiring water spray bars and/or other means to control air pollution. Also, because the crushing and screening operation would be portable, would operate on an intermittent and seasonal basis, any visual and noise impacts would be minor and short-lived.

F. Air Quality

The air quality impacts from the proposed project would be minor because the facility would be relatively small, would operate on an intermittent and temporary basis, and would locate in a previously disturbed site. However, MAQP #3191-04 would include conditions limiting the facility's opacity and the crushing and screening production from the plant, as well as conditions requiring water spray bars to control air pollution. In addition, water spray would be required to control emissions from haul roads, access roads, parking lots, and the general work area. MAQP #3191-04 would also limit total emissions from the crushing and screening facility and any additional VSG equipment operated at the site to 250 tons/year or less, excluding fugitive emissions.

Further, the Department determined that the crushing and screening facility would be a minor source of emissions as defined under the Title V Operating Permit Program because the source's PTE is below the major source threshold level of 100 tons per year for any regulated pollutant.

Pollutant deposition from the facility would be minimal and the pollutants emitted from the facility would be widely dispersed (from factors such as wind speed and wind direction). Also, because of the lack of vegetative cover at the site and the relatively flat topography of the site, pollutant deposition upon any given area would also be minimal. Therefore, good ventilation of pollutant emissions would only have minor effects upon surrounding soils, vegetation, water resources, human populations, and terrestrial and aquatic life. Air quality impacts from operating the crushing and screening equipment in this area would be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The Department, in an effort to assess any potential impacts to any unique endangered, fragile, or limited environmental resources in the initial proposed area of operations, contacted the Montana Natural Heritage Program (MNHP) to identify any species of concern associated with the home pit location (the SE¹/₄ of Section 13, Township 11 North, Range 4 West, in Lewis and Clark County, Montana). Search results concluded there are 2 species of special concern within the defined area. Species of concern include the Great Blue Heron and the Black-tailed Prairie Dog.

The Great Blue Heron has a listed state conservation status of S3, signifying a state-level rank of vulnerable. The global conservation status is G5, signifying a global-level rank of secure. Secure is defined by NatureServe.org as common; widespread and abundant. The Great Blue Heron is found primarily in urban or wilderness wetland settings along major rivers and lakes, especially during breeding season. Nesting trees are typically cottonwoods along major rivers and lakes. No management activities specific to Great Blue Heron are currently occurring in Montana, although annual colony counts have been conducted for the past several years as a follow-up assessment to an earlier state-wide survey

The Black-tailed Prairie Dog has a listed state conservation status of S3, indicating the species is potentially at risk because of limited and/or declining numbers, range, and/or habitat, even though it may be abundant in some areas. The global conservation status is G4, signifying a global-level rank of apparently secure. Black-tailed Prairie Dog colonies are found on flat, open grasslands and shrub/grasslands with low, relatively sparse vegetation. The most frequently occupied habitat in Montana is dominated by western wheatgrass, blue grama and big sagebrush. Black-tailed Prairie Dogs are classified as a Species of Concern in Montana due to declines in abundance and a variety of threats to the population. Prairie dogs are managed under the *Conservation Plan for Black-tailed and White-tailed Prairie Dogs in Montana (Montana Prairie Dog Working Group 2002)*. Black-tailed prairie dogs in Montana still maintain healthy populations distributed throughout the state.

The defined area, in this case, is defined by the township and range of the proposed site, with an additional one-mile buffer. Based on the small size and temporary nature of the equipment operations, the fact that the facility operations would take place in a previously mined area, and the minimal disturbance expected to the environment (water, air, and soils), the Department determined minimal impacts to any unique endangered, fragile, or limited environmental resources would occur.

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

Due to the relatively small size of the facility, the crushing and screening operation would only require small quantities of water, air, and energy for proper operation. Only small quantities of water would be required for dust suppression. In addition, impacts to air resources would be minor because the source a minor industrial source of pollutant emissions, with intermittent and seasonal operations, and because air pollutants generated by the facility would be widely dispersed (See Section 8.F). Energy requirements would also be small, as the facility would be powered by three small industrial diesel generators that would use minor amounts of fuel. Overall, any impacts to water, air, and energy resources would be minor.

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 area of construction/operation. Search results concluded that there are no previously recorded sites within the area proposed for initial operations. However, there has been one previously conducted cultural resource inventory done in the area. According to correspondence from SHPO, there is a low likelihood cultural properties will be impacted. Therefore, a recommendation for a cultural resource inventory is unwarranted at this time. However, should cultural materials be inadvertently discovered during this project the SHPO office must be contacted and the site investigated.

J. Cumulative and Secondary Impacts

The crushing and screening operation would cause minor cumulative and secondary impacts to the physical and biological aspects of the human environment because the new equipment would generate emissions of particulate matter (PM), and PM₁₀. Noise generated from the site would cause minimal impacts because the crushing and screening operation would be seasonal and temporary. Crushing and screening operations typically operate within a previously disturbed open-cut pit used for such purposes. Therefore, there is a low likelihood that assembly and operation of the plant in any of these locations would cause significant additional impacts. Given the expected temporary and portable nature of actual operations, any impacts would be expected to be short-lived, although this assessment is completed with an understanding that no permit condition limits the length of stay at an initial location. Operational conditions and limitations in the permit would be protective of resources by limiting overall impacts to the surrounding environment. Additionally, this facility, in combination with other VSG emissions from equipment operations at the site would not be permitted to exceed 250 tons per year of non-fugitive emissions. However, there are no other sources expected to operate as a result of permitting this equipment.

9. 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 Department has prepared the following comments:

A. Social Structures and Mores

The crushing and screening operation would not cause disruption to the social structures and mores in the area because the source would be a minor industrial source of emissions, would be operating at an area currently designated and used for aggregate mining, would be separated from the general population, and would only have temporary and intermittent operations. Further, the facility would be a minor source of air pollution and would be required to operate according to the conditions that would be placed in MAQP #3191-04.

B. Cultural Uniqueness and Diversity

The cultural uniqueness and diversity of this area would not be impacted by the proposed crushing and screening operation because the proposed site has already been used for the crushing and screening of aggregate, is a bermed pit, and the facility would be a portable source, with seasonal and intermittent operations. Therefore, the predominant use of the surrounding area would not change as a result of this project and the cultural uniqueness and diversity of the area would not be affected.

C. Local and State Tax Base and Tax Revenue

The crushing and screening operation would have little, if any, impact on the local and state tax base and tax revenue because the facility would be a relatively small industrial source (minor source) and would operate seasonally and intermittently. The facility would require the use of a few existing employees. Thus, only minor impacts to the local and state tax base and revenue could be expected from the employees or from facility production. Furthermore, the impact to local tax base and revenue would be minor because the source would be portable and the money generated for taxes would be widespread.

D. Agricultural or Industrial Production

The facility would locate in an existing permitted open-cut pit, adjacent to an area that could be used for animal grazing and agricultural production. Minimal deposition of air pollutants would occur on the surrounding land (as further explained in Section 8.F of this EA), thus, only minor effects on the surrounding vegetation and agricultural production would occur. Further, the crushing and screening operations would have only a minor impact on local industrial production since the facility would be a minor source of aggregate production and air emissions. Also, the facility operations would be small and temporary in nature and would be permitted with operational conditions and limitations that would further minimize impacts upon surrounding vegetation, as described in Section 8.D of this EA. Therefore, impacts from the crushing and screening operations upon agricultural and industrial production would be minor.

E. Human Health

MAQP #3191-04 would incorporate conditions to ensure that the crushing and screening facility would be operated 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 8.F of this EA, the air emissions from this facility would be minimized by the use of water spray and other process limits that would be required by MAQP #3191-04. Also, the facility would be operating on a temporary and intermittent basis and pollutants from the ventilation of emissions at this site (see Section 8.F of this EA). Therefore, only minor impacts would be expected on human health from the proposed crushing and screening facility.

F. Access to and Quality of Recreational and Wilderness Activities

The crushing and screening plant would be operated adjacent to an existing roadway. The facility would also operate within the confines of an existing open-cut pit. Therefore, no impacts upon access to recreational and wilderness activities would result. However, minor effects on the quality of recreational and wilderness activities would occur. Associated effects from noise or facility emissions would occur, but would be minor because the facility would operate within the confines of an existing open-cut pit, would operate near a transportation route, would operate in an industrial area where little recreational opportunity exists, and would operate on a seasonal and intermittent basis. Therefore, any changes in the quality of recreational and wilderness activities, created by noise generated by operating the equipment at the site, would be minor and intermittent.

G. Quantity and Distribution of Employment

The portable crushing and screening operation is relatively small in size, would have seasonal and intermittent operation, and would require only a few employees to operate. No individuals would be expected to permanently relocate to this area of operation as a result of operating the crushing and screening facility. Therefore, no effects upon the quantity and distribution of employment in this area would be expected.

H. Distribution of Population

The portable crushing and screening operation is small and would only require a few existing employees to operate. No individuals would be expected to permanently relocate to the area of operation as a result of operating the crushing and screening facility. Therefore, the crushing and screening facility would not disrupt the normal population distribution.

I. Demands of Government Services

Minor increases would be seen in traffic on existing roadways in the area while the crushing and screening operation is in progress. 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 minor, due to the relatively small size and seasonal nature of the crushing and screening facility.

J. Industrial and Commercial Activity

The crushing and screening operation would represent only a minor increase in the industrial activity in the proposed area because the source would be a relatively small industrial source and would be portable and temporary in nature. No additional industrial or commercial activity would be expected as a result of the proposed operation.

K. Locally Adopted Environmental Plans and Goals

VSG would be allowed, by MAQP #3191-04, to operate in areas designated by the Environmental Protection Agency (EPA) as attainment or unclassified. The permitted production limits and opacity limits would be protective of air quality while the facility is operating at these permitted locations. Because the facility would be a small and portable source and would have intermittent and seasonal operations, any impacts from the facility would be minor and short-lived.

L. Cumulative and Secondary Impacts

The crushing and screening operations would cause minor cumulative and secondary impacts to the social and economic aspects of the human environment in the immediate area because the source is a portable, temporary source. Further, no other industrial operations are expected to result from the permitting of this facility. Minor 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. Further, this facility may be operated in conjunction with other equipment owned and operated by VSG, but any cumulative impacts upon the social and economic aspects of the human environment would be minor and short-lived. Thus, only minor and temporary cumulative effects would result to the local economy.

Recommendation: An EIS is not required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: All potential effects resulting from construction and operation of the proposed facility are minor; therefore, an EIS is not required.

Other groups or agencies contacted or which may have overlapping jurisdiction: Department of Environmental Quality - Permitting and Compliance Division (Industrial and Energy Minerals Bureau); Montana Natural Heritage Program; and the State Historic Preservation Office (Montana Historical Society).

Individuals or groups contributing to this EA: Department of Environmental Quality (Air Resources Management Bureau), Montana Natural Heritage Program, and State Historic Preservation Office (Montana Historical Society).

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