

## AIR QUALITY PERMIT

Issued To: Helena Sand & Gravel Permit #2673-05  
P.O. Box 5960 Application Complete: 03/05/07  
Helena, Montana 59604 Preliminary Determination Issued: 04/12/07  
Department Decision Issued:  
Permit Final:  
AFS Number: 777-2673

An air quality permit is hereby granted to Helena Sand & Gravel pursuant to Sections 75-2-204 and 211 of the Montana Codes 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

Helena Sand & Gravel operates a portable crushing/screening facility that moves to various locations throughout Montana. Permit #2673-05 applies while operating at any location in Montana, except within those areas having a Department of Environmental Quality (Department) approved permitting program or those areas considered tribal lands. *A Missoula County air quality permit will be required for locations within Missoula County.* Addendum #1 applies to the Helena Sand & Gravel facility while operating at any location in or within 10 kilometers (km) of certain particulate matter with an aerodynamic of 10 microns or less (PM<sub>10</sub>) nonattainment areas during the summer months (April 1- September 30) and at sites approved by the Department during the winter months (October 1 – March 31), including the initial site location, the SE¼ of the SE¼ of Section 23, Township 29 North, Route 22 West in Flathead County, Montana. A complete list of permitted equipment is contained in Section I.A. of the permit analysis.

#### B. Current Permit Action

On April 17, 2006, Helena Sand & Gravel submitted a request for a modification to Permit #2673-04 to add a portable Kolberg feeder and washplant. In addition, Helena Sand & Gravel requested the addition of an addendum to Permit #2673-05 to provide the flexibility of operating in or within 10 km of a PM<sub>10</sub> nonattainment area.

On March 5, 2007, Helena Sand & Gravel submitted an application for a modification to replace the existing back-up power generator with a 1500 kW unit; and add a diesel fuel storage tank for the back-up power generator. The Department also updated the permit to reflect current rule references, emission factors, and de minimis friendly permit conditions.

### Section II: Limitations and Conditions

#### A. Emission Limitations

1. Helena Sand & Gravel shall not cause or authorize to be discharged into the atmosphere from any Standards of Performance for New Stationary Sources (NSPS) affected crusher, any visible emissions that exhibit an opacity of 15% or greater averaged over 6 consecutive minutes (ARM 17.8.340, ARM 17.8.752, and 40 CFR Part 60, Subpart OOO).

2. Helena Sand & Gravel shall not cause or authorize to be discharged into the atmosphere from any other NSPS affected equipment, such as screens or conveyor transfers, any visible emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart OOO).
3. Helena Sand & Gravel shall not cause or authorize to be discharged into the atmosphere from any other associated equipment, any visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304 and ARM 17.8.752).
4. Water spray bars shall be available on site 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. Helena Sand & Gravel 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. Emission of airborne particulate matter from any source shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.308 and 17.8.752).
6. Helena Sand & Gravel 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 17.8.752).
7. Helena Sand & Gravel shall not operate more than three crushers at any given time and the maximum combined rated design capacity of the crushers shall not exceed 1100 tons per hour (TPH) (ARM 17.8.749).
8. Crusher production from the facility shall be limited to 9,636,000 tons during any rolling 12-month time period (ARM 17.8.749).
9. Helena Sand & Gravel shall not operate more than 2 screens at any given time and the maximum combined rated design capacity of the screens shall not exceed 700 TPH (ARM 17.8.749).
10. Total combined screen production from the facility shall be limited to 6,132,000 tons during any rolling 12-month period (ARM 17.8.749).
11. Helena Sand & Gravel shall not operate more than one diesel generator at any given time and the maximum rated capacity shall not exceed 1500 kilowatts (kW) and shall not exceed 4,000 hours during any rolling 12-month time period (ARM 17.8.749 and ARM 17.8.1204).
12. If the permitted equipment is used in conjunction with any other equipment owned or operated by Helena Sand & Gravel, at the same site, production shall be limited to correspond with an emission level that does not exceed 250 tons/year during any rolling 12-month time period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).

13. Helena Sand & Gravel shall comply with all applicable standards and limitations, and the reporting, record keeping, and notification requirements contained in 40 CFR Part 60, Subpart OOO, for the crushing/screening plant (ARM 17.8.340 and 40 CFR 60, Subpart OOO).
14. Helena Sand & Gravel shall comply with all applicable standards and limitations, and the reporting, record keeping, and notification requirements contained in 40 CFR Part 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, for any applicable diesel engines (ARM 17.8.340 and 40 CFR 60, Subpart IIII).

B. Emissions Testing Requirements

1. All compliance source tests shall be conducted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
2. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. If the crushing/screening plant is moved to another location, a notice of Intent to Transfer Form must be sent to the Department. In addition, a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The Intent to Transfer Form and the proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.734).
2. Helena Sand & Gravel 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 Helena Sand & Gravel as a permanent business record for at least 5 years following the date of the measurement, shall be submitted to the Department upon request, and shall be available at the plant site for inspection by the Department (ARM 17.8.749).
3. Helena Sand & Gravel shall supply the Department with annual production information for all emission points, as required by the Department, in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the most recent emission inventory report and sources identified in Section I.A of the permit analysis.

Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in units as required by the Department (ARM 17.8.505).

4. Helena Sand & Gravel shall document, by month, the production of the crushing operations. By the 25<sup>th</sup> day of each month, Helena Sand & Gravel shall total the monthly production of the crushing plant for the previous month. The monthly limitation will be used to verify compliance with the production limitation in Section II.A.8. A written report of the compliance verification shall be submitted annually to the Department no later than March 15 and may be submitted along

with the annual emission inventory (ARM 17.8.749).

5. Helena Sand & Gravel shall document, by month, the production of the screening operations. By the 25<sup>th</sup> day of each month, Helena Sand & Gravel shall total the monthly production of the screening plant for the previous month. The monthly limitation will be used to verify compliance with the production limitation in Section II.A.10. A written report of the compliance verification shall be submitted annually to the Department no later than March 15 and may be submitted along with the annual emission inventory (ARM 17.8.749).
6. Helena Sand & Gravel shall document, by month, the hours of operation of the diesel generator. By the 25<sup>th</sup> day of each month, Helena Sand & Gravel shall calculate the hours of operation for the diesel generator for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.11. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
7. Helena Sand & Gravel shall notify the Department of any construction or improvement project conducted, pursuant to ARM 17.8.745 that would include a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation, or the addition of a new emission unit. The notice must be submitted to the Department, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745 (ARM 17.8.745).
8. Helena Sand & Gravel shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit as required in ARM 17.8.1204. The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted with the annual emission inventory information (ARM 17.8.1204 and ARM 17.8.1207).

### Section III: General Conditions

- A. Inspection – Helena Sand & Gravel shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections, surveys, collecting samples, obtaining data, auditing any monitoring equipment 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 Helena Sand & Gravel fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations - Nothing in this permit shall be construed as relieving Helena Sand & Gravel of the responsibility for complying with any applicable federal, or Montana statute, rule or standard, except as specifically provided in ARM 17.8.740, *et seq.* (ARM 17.8.756).
- D. Enforcement - Violations of limitations, conditions and requirements contained herein

may constitute grounds for permit revocation, penalties or other enforcement as specified in Section 75-2-401 *et seq.*, MCA.

- E. Appeals - Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.
- F. Permit Inspection - As required by ARM 17.8.755 Inspection of Permit, a copy of the air quality permit shall be made available for inspection by Department personnel at the location of the permitted source.
- G. Construction Commencement - Construction must begin within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked.
- H. Permit Fees - Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay by the permittee of an annual operation fee by Helena Sand & Gravel may be grounds for revocation of this permit, as required by that Section and rules adopted thereunder by the Board.
- 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. Helena Sand & Gravel shall comply with the conditions contained in this permit while operating at any location in Montana, except within those areas that have a Department approved permitting program.

Permit Analysis  
Helena Sand & Gravel  
Permit Number 2673-05

I. Introduction/Process Description

A. Permitted Equipment

Helena Sand & Gravel operates a portable crushing/screening facility consisting of three portable crushers (up to 1100 tons per hour (TPH)), two screens (up to 700 TPH), a wash plant, a diesel generator (up to 1500 kilowatts (kW)), and associated equipment.

B. Process Description

For a typical operational setup, materials are loaded into a hopper that feeds a conveyor to a portable crushing unit. Material is crushed by the crusher and conveyed to the screen. Properly sized material is conveyed to a stockpile for use and oversized material is conveyed back through the crushing/screening operation and then to a stockpile for use.

C. Permit History

On February 15, 1991, Permit **#2673-00** was issued to Helena Sand & Gravel for the operation of a 1990 Torgerson crusher and associated equipment. The permit also contained specific conditions for any operations on Wolf Road in Lewis and Clark County.

On August 23, 1995, Permit **#2673-01** was issued to Helena Sand & Gravel. As part of this permit alteration, a 1994 Pioneer jaw crusher (including one screen, and two conveyors as part of the machinery) was added to the existing equipment. The existing equipment consisted of a 1990 Torgerson crusher (which includes one screen and two conveyors as part of the machinery).

On November 26, 1997, Permit **#2673-02** was issued to Helena Sand & Gravel. Helena Sand & Gravel proposed to add a 200 TPH 1984 El Jay Rollercone crusher to their facility. The emission inventory was updated with current emission factors. Helena Sand & Gravel agreed to an annual operational limit to allow the facility to stay below the Title V threshold. The rule references in the permit were also updated during the alteration.

Helena Sand & Gravel was issued Permit **#2673-03** on May 19, 1999. The alteration included the addition of a 1998 Nordberg HP300 cone crusher (maximum capacity 250 TPH), a 1998 Nordberg HP400 cone crusher (maximum capacity 250 TPH), a 1998 Diester screen (maximum capacity 350 TPH), and a 1996 El Jay screen (maximum capacity 350 TPH) to the existing permit. Helena Sand & Gravel agreed to a 4,800 hour per year operational limit in order to operate the new equipment with the existing equipment and stay below the Title V threshold. Permit #2673-03 replaced Permit #2673-02.

On May 15, 2002, Helena Sand & Gravel requested a permit modification for the removal of the 1990 Torgerson crusher, and the 1984 Rollercone crusher. In addition, Helena Sand & Gravel requested clarification for the size of the diesel generator (910 kW). Permit **#2673-04** replaced Permit #2673-03.

D. Current Permit Action

On April 17, 2006, Helena Sand & Gravel submitted a request for a modification to Permit #2673-04 to add a portable Kolberg feeder and washplant. In addition, Helena Sand & Gravel requested the addition of an addendum to Permit #2673-05 to provide the flexibility of operating in or within 10 kilometers (km) of a certain particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) nonattainment area.

On March 5, 2007, Helena Sand & Gravel submitted an application for a modification to replace the existing back-up power generator with a 1500 kW unit; and add a diesel fuel storage tank for the back-up power generator. The Department of Environmental Quality (Department) also updated the permit to reflect current rule references, emission factors, and de minimis friendly permit conditions. Permit #2673-05 will replace Permit #2673-04.

E. Additional Information

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

II. Applicable Rules and Regulations

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

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

1. 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.
2. 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.*, MCA.

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

3. 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.

4. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant which would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner that a public nuisance is created.

B. ARM 17.8, Sub-Chapter 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
5. ARM 17.8.223 Ambient Air Quality Standard for PM-10

Helena Sand & Gravel must comply with the applicable ambient air quality standards.

C. ARM 17.8, Sub-Chapter 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 to an outdoor atmosphere from any source installed after Nov. 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne Particulate Matter (PM). (2) Under this rule, Helena Sand & Gravel 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 17.8.310 Particulate Matter, Industrial Process. This section requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this section.
4. ARM 17.8.340 Standard of Performance for New Stationary Sources. This rule incorporates, by reference, 40 CFR 60, Standards of Performance for New Stationary Sources (NSPS). Helena Sand & Gravel is considered an NSPS-affected facility under 40 CFR 60 and is subject to the requirements of Subpart OOO and Subpart IIII.

D. ARM 17.8, Sub-Chapter 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 Helena Sand & Gravel 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. Helena Sand & Gravel was not required to submit an application fee for the current permit action because it is considered an administrative 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. This operation fee is based on the actual or estimated 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, as 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 which prorate the required fee amount.

E. ARM 17.8, Sub-Chapter 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 alteration to construct, alter, or use any asphalt plant, crusher, or screen that has the Potential to Emit (PTE) greater than 15 tons per year of any pollutant. Helena Sand & Gravel has the potential to emit more than 15 tons per year of particulate matter, PM<sub>10</sub>, NO<sub>x</sub>, CO, and SO<sub>2</sub>; therefore, a 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. Helena Sand & Gravel submitted the appropriate permit application for the current permit modification. (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. Helena Sand & Gravel submitted an affidavit of publication of public notice for the March 2, 2007, issue of the *Independent Record*, a newspaper of general publication in Helena, Montana, 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 BACT analysis is contained in Section IV of this permit analysis.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving Helena Sand & Gravel 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 altered 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 Helena Sand & Gravel, 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 the changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
14. ARM 17.8.765 Transfer of Permit. (1) This rule states that an air quality permit may be transferred from one location to another if the Department receives a complete notice of Intent to Transfer location, the facility will operate in the new location for less than 1 year, the facility will comply with the FCAA and the Clean Air Act of Montana, and the facility complies with other applicable rules. (2) This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

F. 17.8, Sub-Chapter 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 sub-chapter.
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 Federal Clean Air Act that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source because it is not a listed source and does not have the potential to emit more than 250 tons per year of any air pollutant.

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

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any stationary source having:
  - a. PTE > 100 tons/year of any pollutant;
  - b. PTE > 10 tons/year of any one Hazardous Air Pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or a lesser quantity as the Department may establish by rule; or
  - c. Sources with the PTE > 70 tons/year of PM<sub>10</sub> in a serious PM<sub>10</sub> non-attainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. 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 Air Quality Permit #2673-05 for Helena Sand & Gravel, the following conclusions were made:
  - a. The facility's PTE is less than 100 tons/year for all criteria pollutants.
  - b. The facility's PTE is less than 10 tons/year of 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 subject to a current NSPS.
  - e. This facility is not subject to any current NESHAP standards.
  - f. This source is not a Title IV affected source nor a solid waste combustion unit.

g. This source is not an EPA designated Title V source. Based on these facts, the Department determined that Helena Sand & Gravel will be a minor source of emissions as defined under Title V. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit, Helena Sand & Gravel will be required to obtain a Title V Operating Permit.

h. ARM 17.8.1204(3). The Department may exempt a source from the requirement to obtain an air quality operating permit by establishing federally enforceable limitations which limit the source's potential to emit.

i. In applying for an exemption under this section, the owner or operator of the source shall certify to the Department that the source's potential to emit does not require the source to obtain an air quality operating permit.

ii. Any source that obtains a federally enforceable limit on potential to emit shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit.

The Department has determined that the annual reporting requirements contained in the permit are sufficient to satisfy this requirement.

3. ARM 17.8.1207 Certification of Truth, Accuracy, and Completeness. The compliance certification submittal required by 17.8.1204(3) shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this subchapter shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

### III. BACT Determination

A BACT determination is required for each new or altered source. Helena Sand & Gravel shall install on the new or altered source the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized.

#### A. Area Source Fugitive PM/PM<sub>10</sub> Emissions and Crushing/Screening PM/PM<sub>10</sub> Emissions

Two types of emissions controls are readily available and used for dust suppression of fugitive emissions at the site, fugitive emissions for the surrounding area of operations, and for equipment emissions from the crushing/screening operation. These two control methods are water and chemical dust suppressant. Chemical dust suppressant could be used for dust suppression on the area surrounding the crushing/screening operation and for emissions from the crushing/screening operation. However, because water is more readily available, and is more cost effective, water has been identified as the most appropriate method of pollution control of particulate emissions for the general plant area. In addition, water suppression has been required of recently permitted similar sources. However, Helena Sand & Gravel may use chemical dust suppressant to assist in controlling particulate emissions from the surrounding plant area where it would assist in reducing emissions of particulate matter.

Helena Sand & Gravel 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. Further, Helena Sand & Gravel shall not cause or authorize to be discharged into the atmosphere from any NSPS affected crusher any visible emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes and 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 15% or greater averaged over 6 consecutive minutes. Helena Sand & Gravel must also take reasonable precautions to limit the fugitive emissions of airborne particulate matter from haul roads, access roads, parking areas, and the general area of operation. Helena Sand & Gravel is required to have water spray bars and water available on site (at all times) and to apply the water, as necessary, to maintain compliance with the opacity and reasonable precaution limitations. Helena Sand & Gravel may also use chemical dust suppression to maintain compliance with emissions limitations in Section I.A of Permit #2673-05. The Department determined that using water spray bars, water, and/or chemical dust suppressant to maintain compliance with the opacity requirements and reasonable precaution limitations constitutes BACT for the crushing/screening operation.

**B. Diesel Generators**

Because of the limited amount of emissions produced by the diesel generators and the lack of readily available and cost effective add-on controls, add-on controls would be cost prohibitive for the proposed project. Therefore, the Department determined that proper operation and maintenance with no additional controls constitutes BACT for the diesel generators in this case.

The control options required for the proposed crushing/screening facility and for the diesel generators/engines that would be used to power the facility are similar to other recently permitted similar sources.

**IV. Emission Inventory**

Source	Ton/Year					
	PM	PM <sub>10</sub>	NO <sub>x</sub>	VOC	CO	SO <sub>x</sub>
Up to 3 Crushers (up to 1100 TPH)	5.78	2.60				
Up to 2 Screens (up to 700 TPH)	6.75	2.27				
Material Transfer	2.94	1.21				
Pile Forming	28.03	13.14				
Bulk Loading	3.85	1.30				
Diesel Generator (up to 1500kW)	8.85	8.85	96.55	9.94	26.88	8.24
Haul Roads	38.05	10.81				
Diesel Storage Tank (up to 10,000 gallon)				13.53		
<b>Total</b>	<b>94.25</b>	<b>40.18</b>	<b>96.55</b>	<b>23.47</b>	<b>26.88</b>	<b>8.24</b>

**Up to 3 Crushers (up to 1100 TPH)**

Maximum Process Rate: 1100 ton/hr  
Hours of operation: 8760 hr/yr

**PM Emissions:**

Emission Factor: 0.0012 lb/ton (controlled) (AP-42, Table 11.19.2-2, 8/04)  
Hourly Calculations: 0.0012 lb/ton \* 1100 tons/hr = 1.32 lb/hr  
Daily Calculations: 1.32 lb/hr \* 24 hr/day = 31.68 lb/day  
Annual Calculations: 1.32 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 5.78 ton/yr

PM<sub>10</sub> Emissions:  
 Emission Factor: 0.00054 lb/ton (controlled) (AP-42, Table 11.19.2-2, 8/04)  
 Hourly Calculations: 0.00054 lb/ton \* 1100 tons/hr = 0.59 lb/hr  
 Daily Calculations: 0.59 lb/hr \* 24 hr/day = 14.26 lb/day  
 Annual Calculations: 0.59 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 2.60 ton/yr

**Up to 2 Screens (up to 700 TPH)**

Process Rate: 700 ton/hr  
 Hours of operation: 8760 hr/yr

PM Emissions:  
 Emission Factor: 0.0022 lb/ton (controlled) (AP-42, Table 11.19.2-2, 8/04)  
 Hourly Calculations: 0.0022 lb/ton \* 700 ton/hr = 1.54 lb/hr  
 Daily Calculations: 1.54 lb/hr \* 24 hr/day = 36.96 lb/day  
 Annual Calculations: 1.54 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 6.75 ton/yr

PM<sub>10</sub> Emissions:  
 Emission Factor: 0.00074 lb/ton (controlled) (AP-42, Table 11.19.2-2, 8/04)  
 Hourly Calculations: 0.00074 lb/ton \* 700 ton/hr = 0.52 lb/hr  
 Daily Calculations: 0.52 lb/hr \* 24 hr/day = 12.43 lb/day  
 Annual Calculations: 0.52 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 2.27 ton/yr

**Diesel Generator**

Generator Size = up to 1500 kW  
 1kW = 1.341 hp  
 1500 kW \* 1.341 = 2011.5 hp

Hours of operation: 4000 hr/yr

PM Emissions  
 Emission Factor: 0.0022 lb/hp-hr (AP-42, Table 3.3-1, 10/96)  
 Hourly Calculations: 2011.5 hp \* 0.0022 lb/hp-hr = 4.425 lb/hr  
 Daily Calculations: 2011.5 hp \* 0.0022 lb/hp-hr \* 10.5 hr/day = 46.47 lb/day  
 Annual Calculation: 2011.5 hp \* 0.0022 \* 4000hr/yr \* 0.0005 lb/ton = 8.85 ton/yr

PM<sub>10</sub> Emissions:  
 Emission Factor: 0.0022 lb/hp-hr (AP-42, Table 3.3-1, 10/96)  
 Hourly Calculations: 2011.5 hp \* 0.0022 lb/hp-hr = 4.43 lb/hr  
 Daily Calculations: 2011.5 hp \* 0.0022 lb/hp-hr \* 10.5 hr/day = 48.67 lb/day  
 Annual Calculation: 2011.5 hp \* 0.0022 \* 4000hr/yr \* 0.0005 lb/ton = 8.85 ton/yr

NOx Emissions:  
 Emission Factor: 0.024 lb/hp-hr (AP-42, Table 3.3-1, 10/96)  
 Hourly Calculations: 2011.5 hp \* 0.024 lb/hp-hr = 62.36 lb/hr  
 Daily Calculations: 2011.5 hp \* 0.024 lb/hp-hr \* 10.5 hr/day = 506.90 lb/day  
 Annual Calculation: 2011.5 hp \* 0.024 \* 4000hr/yr \* 0.0005 lb/ton = 96.55 ton/yr

VOC Emissions:  
 Emission Factor: 0.00247 lb/hp-hr (AP-42, Table 3.3-1, 10/96)  
 Hourly Calculations: 2011.5 hp \* 0.00247 lb/hp-hr = 4.96 lb/hr  
 Daily Calculations: 2011.5 hp \* 0.00247 lb/hp-hr \* 10.5 hr/day = 52.17 lb/day  
 Annual Calculation: 2011.5 hp \* 0.00247 \* 4000hr/yr \* 0.0005 lb/ton = 9.94 ton/yr

CO Emissions:  
 Emission Factor: 0.00668 lb/hp-hr (AP-42, Table 3.3-1, 10/96)  
 Hourly Calculations: 2011.5 hp \* 0.00668 lb/hp-hr = 13.44 lb/hr  
 Daily Calculations: 2011.5 hp \* 0.00668 lb/hp-hr \* 10.5 hr/day = 141.09 lb/day  
 Annual Calculation: 2011.5 hp \* 0.00668 \* 4000hr/yr \* 0.0005 lb/ton = 26.87 ton/yr

SOx Emissions:  
 Emission Factor: 0.00205 lb/hp-hr (AP-42, Table 3.3-1, 10/96)  
 Hourly Calculations: 2011.5 hp \* 0.00205 lb/hp-hr = 4.12 lb/hr  
 Daily Calculations: 2011.5 hp \* 0.00205 lb/hp-hr \* 10.5 hr/day = 43.30 lb/day  
 Annual Calculation: 2011.5 hp \* 0.00205 \* 4000hr/yr \* 0.0005 lb/ton = 8.25 ton/yr

**Material Transfer**

Process Rate: 400 ton/hr  
 Number of Transfers 15 transfers  
 Hours of operation: 8760 hr/yr

## PM Emissions:

Emission Factor: 0.00014 lb/ton (controlled) (AP-42, Table 11.19.2-2, 8/04)  
 Hourly Calculations:  $0.00014 \text{ lb/ton} * 400 \text{ ton/hr} * 15 \text{ transfers} = 0.84 \text{ lb/hr}$   
 Daily Calculations:  $0.84 \text{ lb/hr} * 24 \text{ hr/day} = 20.16 \text{ lb/day}$   
 Annual Calculations:  $0.84 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 2.94 \text{ ton/yr}$

PM<sub>10</sub> Emissions:

Emission Factor: 0.000046 lb/ton (controlled) (AP-42, Table 11.19.2-2, 8/04)  
 Hourly Calculations:  $0.000046 \text{ lb/ton} * 400 \text{ tons/hr} * 15 \text{ transfers} = 0.28 \text{ lb/hr}$   
 Daily Calculations:  $0.28 \text{ lb/hr} * 24 \text{ hr/day} = 6.62 \text{ lb/day}$   
 Annual Calculations:  $0.28 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 1.21 \text{ ton/yr}$

**Pile Forming**

Process Rate: 400 ton/hr  
 Number of Piles 5 piles  
 Hours of operation: 8760 hr/yr

## PM Emissions:

Emission Factor: 0.0032 lb/ton (controlled) (AP-42, Section 13.2.4, 1/95)  
 Hourly Calculations:  $0.0032 \text{ lb/ton} * 400 \text{ ton/hr} * 5 \text{ piles} = 6.4 \text{ lb/hr}$   
 Daily Calculations:  $6.4 \text{ lb/hr} * 24 \text{ hr/day} = 153.60 \text{ lb/day}$   
 Annual Calculations:  $6.4 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 28.03 \text{ ton/yr}$

PM<sub>10</sub> Emissions:

Emission Factor: 0.0015 lb/ton (AP-42, Section 13.2.4, 1/95)  
 Hourly Calculations:  $0.0015 \text{ lb/ton} * 400 \text{ ton/hr} * 5 \text{ piles} = 3.0 \text{ lb/hr}$   
 Daily Calculations:  $2.40 \text{ lb/hr} * 24 \text{ hr/day} = 72.0 \text{ lb/day}$   
 Annual Calculations:  $3.60 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 13.14 \text{ ton/yr}$

**Bulk Loading**

Process Rate: 400 ton/hr  
 Number of Loads 4 load  
 Hours of operation: 8760 hr/yr  
 Control Efficiency: 50%

## PM Emissions:

Emission Factor: 0.0022 lb/ton (AP-42, Table 11.19.2-2, 8/04)  
 Hourly Calculations:  $0.0022 \text{ lb/ton} * 400 \text{ ton/hr} = 0.88 \text{ lb/hr}$   
 Daily Calculations:  $0.88 \text{ lb/hr} * 24 \text{ hr/day} = 21.12 \text{ lb/day}$   
 Annual Calculations:  $0.88 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 3.85 \text{ ton/yr}$

PM<sub>10</sub> Emissions:

Emission Factor: 0.00074 lb/ton (AP-42, Table 11.19.2-2, 8/04)  
 Hourly Calculations:  $0.00074 \text{ lb/ton} * 400 \text{ ton/hr} = 0.296 \text{ lb/hr}$   
 Daily Calculations:  $0.296 \text{ lb/hr} * 24 \text{ hr/day} = 7.10 \text{ lb/day}$   
 Annual Calculations:  $0.296 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 1.30 \text{ ton/yr}$

**Haul Roads**

Vehicle miles traveled: 15 VMT/day {Estimated}  
 Assumption: Rated Load Capacity < 50 tons  
 Hours of Operation: 8760 hr/yr  
 24 hr/day  
 365 day/yr

## TSP Emissions:

Emission Factor: 13.90 lb/VMT (controlled) (AP-42 Section 13.2.2, 12/03)  
 Calculations:  $15.0 \text{ VMT/day} * 13.90 \text{ lb/VMT} = 208.50 \text{ lb/day}$   
 $208.50 \text{ lb/day} * 365 \text{ day/yr} * 0.0005 \text{ ton/lb} = 38.05 \text{ ton/yr}$

PM-10 Emissions:

Emission Factor:	3.95 lb/VMT (controlled)	(AP-42 Section 13.2.2, 12/03)	
Calculations:	15 VMT/day * 3.95 lb/VMT =		59.25 lb/day
	59.25 lb/day * 365 day/yr * 0.0005 ton/lb =		10.81 ton/yr

V. Existing Air Quality and Impacts

Permit #2673-05 is issued for the operation of a portable crushing/screening facility to operate at various locations throughout Montana. This facility would be allowed to operate at any area designated as attainment or unclassified for all National Ambient Air Quality Standards (NAAQS); excluding those counties that have a Department-approved permitting program, those areas considered tribal lands, or those areas in or within 10 km of certain PM<sub>10</sub> nonattainment areas. A Missoula County air quality permit would be required for locations within Missoula County, Montana. Addendum #1 of Permit #2673-05 would cover this portable crushing/screening plant while operating at locations in or within 10 km of a PM<sub>10</sub> nonattainment area during the winter season (October 1 through March 31). Addendum #1 of Permit #2673-05 would also allow for summertime operations (April 1-September 30) at any location in or within 10 km of the Butte, Columbia Falls, Libby, Kalispell, Thompson Falls, and Whitefish PM<sub>10</sub> nonattainment areas.

VI. Air Quality Impacts

Based on the information provided and the conditions established in Permit #2673-05, the Department believes that the amount of controlled emissions generated by this facility will not exceed any ambient air quality standard established for any of Montana's attainment or unclassified ambient air quality areas. Additionally, the limitations and conditions established in Addendum #1 would further reduce the facility emissions generated while operating in the nonattainment areas and would also be protective of corresponding ambient air quality standards. In addition, this source is portable and any air quality impacts will be minimal.

VII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, MCA, the Department has conducted a private property taking and damaging assessment and has determined there are no taking or damaging implications.

VIII. Environmental Assessment

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

Addendum 1  
Helena Sand & Gravel  
Permit #2673-05

An addendum to air quality Permit #2673-05, with conditions, is hereby granted to Helena Sand & Gravel pursuant to Sections 75-2-204 and 75-2-211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.765, *et seq.*, as amended, for the following:

I. Permitted Equipment

Helena Sand & Gravel owns and operates a portable crushing/screening facility consisting of 3 portable crushers, (up to 1,100 tons per hour (TPH)), two portable screens (up to 700 TPH), one diesel generator (up to 1500 kilowatts (kW)), and associated equipment. Helena Sand & Gravel operates at various locations throughout Montana, including locations in or within 10 kilometers (km) of the following PM<sub>10</sub> (particulate matter with an aerodynamic diameter of 10 microns or less) Nonattainment Areas (NAAs): Butte, Columbia Falls, Kalispell, Libby, Thompson Falls, and Whitefish.

II. Seasonal and Site Restrictions

Addendum 1 to Permit #2673-05 applies to the Helena Sand & Gravel facility while operating at any location in or within 10 kilometers of certain PM<sub>10</sub> NAAs. Additionally, seasonal and site restrictions apply to the facility as follows.

- A. During the winter season (October 1 - March 31) – The only location(s) in or within 10 km of a PM<sub>10</sub> nonattainment area where Helena Sand & Gravel may operate is:
- The Tracht Pit, 1285 Stillwater Road in Kalispell, Montana. The legal description of the site is the SE<sup>1</sup>/<sub>4</sub>, of the SE<sup>1</sup>/<sub>4</sub>, of Section 23, Township 29 North, Range 22 West in Flathead County, Montana;
  - Any other site that may be approved, in writing, by the Department of Environmental Quality (Department).
- B. During the summer season (April 1-September 30) – Helena Sand & Gravel may operate at any location in or within 10 km of certain PM<sub>10</sub> NAAs, including, but not limited to Butte, Columbia Falls, Kalispell, Libby, Thompson Falls, and Whitefish.
- C. Helena Sand & Gravel shall comply with the limitations and conditions contained in Addendum 1 to Permit #2673-05. Addendum 1 shall be valid until revoked or modified. The Department reserves the authority to modify Addendum 1 at any time based on local conditions of any future site. These conditions may include, but are not limited to, local terrain, meteorological conditions, proximity to residences or other businesses, etc.

III. Limitations and Conditions

- A. Operational Limitations and Conditions – **Winter Season (October 1 – March 31)**
1. Water spray bars shall be available on site at all times, and operated as necessary, on the crushers, screens, and all transfer points whenever the crushing/screening plant is operating (ARM 17.8.749).
  2. All visible emissions from the crushing/screening plant may not exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8. 749).

3. Helena Sand & Gravel shall not cause or authorize to be discharged into the atmosphere from any other equipment, such as transfer points, any visible emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).
4. Helena Sand & Gravel shall not cause or authorize to be discharged into the atmosphere from haul roads, access roads, parking lots, or the general plant property any visible fugitive emissions that exhibit an opacity of 10% or greater (ARM 17.8.749).
5. Helena Sand & Gravel shall treat all unpaved portions of the access roads, parking lots, and general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the 10% opacity limitation (ARM 17.8.749).
6. The combined Helena Sand & Gravel crusher production for the facility shall not exceed 7,150 tons during any rolling 24-hour time period (ARM 17.8.749).
7. The Helena Sand & Gravel screen production shall not exceed 4,550 tons during any rolling 24-hour time period (ARM 17.8.749).
8. The hours of operation of the diesel-fired generator shall not exceed 6.5 hours during any rolling 24-hour time period (ARM 17.8.749).

C. Operational Limitations and Conditions – **Summer Season (April 1 – September 30)**

1. Water spray bars shall be available on site at all times, and used, as necessary on the crushers, screens, and all transfer points whenever the crushing/screening plant is operating (ARM 17.8.749).
2. All visible emissions from the crushing/screening plant may not exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).
3. Helena Sand & Gravel shall not cause or authorize to be discharged into the atmosphere from any other equipment, such as transfer points, any visible emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).
4. Helena Sand & Gravel shall not cause or authorize to be discharged into the atmosphere from haul roads, access roads, parking lots, or the general plant property any visible fugitive emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).
5. Helena Sand & Gravel shall treat all unpaved portions of the haul roads, access roads, parking lots, and general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the 10% opacity limitation (ARM 17.8.749).
6. Helena Sand & Gravel shall not operate more than one diesel generator at any given time and the maximum rated design capacity shall not exceed 1500 kW and shall not exceed 4,000 hours during any rolling 12-month time period (ARM 17.8.749).

D. Operational Reporting Requirements

1. Helena Sand & Gravel shall provide the Department with written notification of job completion within 10 working days of job completion (ARM 17.8.749).
2. Helena Sand & Gravel shall provide the Department with written notice of relocation of the permitted equipment within 15 working days before physical transfer of equipment (ARM 17.8.765).
3. Production information for the sites covered by this addendum must be submitted to the Department with the annual emissions inventory request or within 30 days of completion of the project. The information must include (ARM 17.8.749):
  - a. Tons of material crushed by each crusher at each site;
  - b. Tons of material screened by each screen at each site;
  - c. Tons of bulk material loaded at each site;
  - d. Daily hours of operation at each site;
  - e. Gallons of diesel fuel used for the generators/engines at each site;
  - f. Fugitive dust information consisting of all plant vehicles, including the following:
    - i. Number of vehicles
    - ii. Vehicle type
    - iii. Vehicle weight, loaded
    - iv. Vehicle weight, unloaded
    - v. Number of tires on vehicle
    - vi. Average trip length
    - vii. Number of trips per day per vehicle
    - viii. Average vehicle speed
    - ix. Area of activity
    - x. Vehicle fuel usage (gasoline and diesel) annual total
  - g. Fugitive dust control for haul roads and general plant area:
    - i. Hours of operation of water trucks
    - ii. Application schedule for chemical dust suppressant, if applicable.
5. Helena Sand & Gravel shall document, by day, the combined total crushing production during the winter season. Helena Sand & Gravel shall sum the combined total crushing production during the previous 24 hours to verify compliance with the limitations in Section III.A.6. A written report of compliance and the emissions inventory shall be submitted to the Department annually. The report for the previous calendar year shall be submitted along with the annual emissions inventory (ARM 17.8.749).
6. Helena Sand & Gravel shall document, by day, the combined total crushing production during the summer season. Helena Sand & Gravel shall sum the combined total crushing production during the previous 24 hours to verify

compliance with the limitations in Section III.B.6. A written report of compliance and the emissions inventory shall be submitted to the Department annually. The report for the previous calendar year shall be submitted along with the annual emissions inventory (ARM 17.8.749).

7. Helena Sand & Gravel shall document, by day, the total screening production during the summer season. Helena Sand & Gravel shall sum the total screening production during the previous 24 hours to verify compliance with the limitations in Section III.A.7. A written report of compliance and the emissions inventory shall be submitted to the Department annually. The report for the previous calendar year shall be submitted along with the annual emissions inventory (ARM 17.8.749).
8. Helena Sand & Gravel shall document, by day, the total screening production during the summer season. Helena Sand & Gravel shall sum the total screening production during the previous 24 hours to verify compliance with the limitations in Section III.B.7. A written report of compliance and the emissions inventory shall be submitted to the Department annually. The report for the previous calendar year shall be submitted along with the annual emissions inventory (ARM 17.8.749).
9. Helena Sand & Gravel shall document, by day the hours of operation of the diesel generator during the winter season. Helena Sand & Gravel shall total the hours of operation of the diesel generator during the previous 24 hours to verify compliance with the limitations in Section III.A.8. A written report of compliance verification and the emissions inventory shall be submitted to the Department annually. The report for the previous calendar year shall be submitted along with the annual emission inventory (ARM 17.8.749).
10. Helena Sand & Gravel shall document, by month the hours of operation of the diesel generator during the summer season. Helena Sand & Gravel shall total the hours of operation of the diesel generator during the previous 12 months to verify compliance with the limitations in Section III.B.8. A written report of compliance verification and the emissions inventory shall be submitted to the Department annually. The report for the previous calendar year shall be submitted along with the annual emission inventory (ARM 17.8.749).

Addendum 1 Analysis  
Helena Sand & Gravel  
Permit #2673-05

I. Helena Sand & Gravel will operate a portable crushing/screening facility consisting of up to 3 crushers (up to 1100 TPH), up to 2 screens (up to 700 TPH), one diesel generator (up to 1500 kW), and associated equipment. at various locations throughout Montana, except within those areas having a Department of Environmental Quality (Department) approved permitting program. *A Missoula County air quality permit will be required for locations within Missoula County.*

II. Permit History

On February 15, 1991, Permit #2673-00 was issued to Helena Sand & Gravel for the operation of a 1990 Torgerson crusher and associated equipment. The permit also contained specific conditions for any operations on Wolf Road in Lewis and Clark County.

On August 23, 1995, Permit #2673-01 was issued to Helena Sand & Gravel. As part of this permit alteration, a 1994 Pioneer jaw crusher (including one screen, and two conveyors as part of the machinery) was added to the existing equipment. The existing equipment consisted of a 1990 Torgerson crusher (which includes one screen and two conveyors as part of the machinery).

On November 26, 1997, Permit #2673-02 was issued to Helena Sand & Gravel. Helena Sand & Gravel proposed to add a 200 TPH 1984 El Jay Rollercone crusher to their facility. The emission inventory was updated with current emission factors. Helena Sand & Gravel agreed to an annual operational limit to allow the facility to stay below the Title V threshold. The rule references in the permit were also updated during the alteration.

Helena Sand & Gravel was issued Permit #2673-03 on May 19, 1999. The alteration included the addition of a 1998 Nordberg HP300 cone crusher (maximum capacity 250 TPH), a 1998 Nordberg HP400 cone crusher (maximum capacity 250 TPH), a 1998 Diester screen (maximum capacity 350 TPH), and a 1996 El Jay screen (maximum capacity 350 TPH) to the existing permit. Helena Sand & Gravel agreed to a 4,800 hour per year operational limit in order to operate the new equipment with the existing equipment and stay below the Title V threshold. Permit #2673-03 replaced Permit #2673-02.

On May 15, 2002, Helena Sand & Gravel requested a permit modification for the removal of the 1990 Torgerson crusher, and the 1984 Rollercone crusher. In addition, Helena Sand & Gravel requested clarification for the size of the diesel generator (910 kW). Permit #2673-04 replaced Permit #2673-03.

III. Current Permit Action

On April 17, 2006, Helena Sand & Gravel submitted a request for a modification to Permit #2673-04 to add a portable Kolberg feeder and washplant. In addition, Helena Sand & Gravel requested the addition of an addendum to Permit #2673-05 to provide the flexibility of operating in or within 10 km of a PM<sub>10</sub> nonattainment area.

On March 5, 2007, Helena Sand & Gravel submitted an application for a modification to replace the existing back-up power generator with a 1500 kW unit; and add a diesel fuel storage tank for the back-up power generator. The Department also updated the permit to reflect current rule references, emission factors, and de minimis friendly permit conditions. Permit #2673-05 will replace Permit #2673-04.

#### IV. Applicable Rules and Regulations

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

ARM 17.8, Subchapter 7, Permit, Construction and Operation of Air Contaminant Sources, including, but not limited to:

- A. ARM 17.8.749 Conditions for Issuance of Permit. This rule requires that the source demonstrate compliance with applicable rules and standards before a permit can be issued. Also, a permit may be issued with such conditions as are necessary to assure compliance with all applicable rules and standards. Helena Sand & Gravel demonstrated compliance with all applicable rules and standards as required for permit issuance.
- B. ARM 17.8.764 Modification of Permit. An air quality permit may be modified 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 in emissions because of the changed conditions. A source may not increase its emissions beyond those found in its permit unless the source applies for and receives another permit.
- C. ARM 17.8.765 Transfer of Permit. An air quality permit may be transferred from one location to another if:
  - 1. Written notice of Intent to Transfer location and public notice is sent to the Department.
  - 2. The source will operate in the new location for a period of less than 1 year.
  - 3. The source will not have any significant impact on any nonattainment area or any Class I area.

Helena Sand & Gravel must submit proof of compliance with the transfer and public notice requirements when they transfer to the location(s) covered by this addendum, and will only be allowed to stay in the new location for a period of less than 1 year. Also, implementing the conditions and controls of this addendum will keep Helena Sand & Gravel from having a significant impact on any PM<sub>10</sub> nonattainment area.

#### VI. Emission Inventory

## Winter Season-Emission Inventory

Source	lb/day					
	PM	PM <sub>10</sub>	NO <sub>x</sub>	VOC	CO	SO <sub>x</sub>
2 Crushers (1100 TPH Combined Capacity)	9.90	4.43	---	---	---	---
2 Screens (700 TPH Combined Capacity)	11.55	3.89	---	---	---	---
Truck Unloading	6.60	2.22	---	---	---	---
Material Transfer	6.30	2.07	---	---	---	---
Pile Forming	38.40	18.0	---	---	---	---
Diesel Generators (1500-kW Capacity)	33.19	33.19	467.67	37.26	100.78	30.93
Haul Roads	55.60	15.80	---	---	---	---
Diesel Storage Tank (up to 10,000 gallon)	---	---	---	74.16	---	---
<b>Total</b>	<b>161.54</b>	<b>79.60</b>	<b>467.67</b>	<b>111.42</b>	<b>100.78</b>	<b>30.93</b>
*A complete emission inventory for Addendum #2 (Winter Season) is below.						
**Production & generator hours limited to keep PM <sub>10</sub> emissions below 82 lb/day (modeling guidance).						

### Up to 3 Crushers (up to 1100 TPH)

Maximum Process Rate: 1100 ton/hr  
 Hours of operation: 2737 hr/yr

#### PM Emissions:

Emission Factor: 0.0012 lb/ton (controlled) (AP-42, Table 11.19.2-2, 8/04)  
 Hourly Calculations: 0.0012 lb/ton \* 1100 tons/hr = 1.32 lb/hr  
 Daily Calculations: 1.32 lb/hr \* 7.5 hr/day = 9.90 lb/day  
 Annual Calculations: 1.32 lb/hr \* 2737 hr/yr \* 0.0005 ton/lb = 1.81 ton/yr

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

Emission Factor: 0.00054 lb/ton (controlled) (AP-42, Table 11.19.2-2, 8/04)  
 Hourly Calculations: 0.00054 lb/ton \* 1100 tons/hr = 0.59 lb/hr  
 Daily Calculations: 0.59 lb/hr \* 7.5 hr/day = 4.43 lb/day  
 Annual Calculations: 0.59 lb/hr \* 2737 hr/yr \* 0.0005 ton/lb = 0.81 ton/yr

### Up to 2 Screens (up to 700 TPH)

Process Rate: 700 ton/hr  
 Hours of operation: 2737 hr/yr

#### PM Emissions:

Emission Factor: 0.0022 lb/ton (controlled) (AP-42, Table 11.19.2-2, 8/04)  
 Hourly Calculations: 0.0022 lb/ton \* 700 ton/hr = 1.54 lb/hr  
 Daily Calculations: 1.54 lb/hr \* 7.5 hr/day = 11.55 lb/day  
 Annual Calculations: 1.54 lb/hr \* 2737 hr/yr \* 0.0005 ton/lb = 2.11 ton/yr

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

Emission Factor: 0.00074 lb/ton (controlled) (AP-42, Table 11.19.2-2, 8/04)  
 Hourly Calculations: 0.00074 lb/ton \* 700 ton/hr = 0.52 lb/hr  
 Daily Calculations: 0.52 lb/hr \* 6.5 hr/day = 3.89 lb/day  
 Annual Calculations: 0.52 lb/hr \* 2737 hr/yr \* 0.0005 ton/lb = 0.71 ton/yr

### Diesel Generator

Generator Size = up to 1500 kW  
 1kW = 1.341 hp  
 1500 kW \* 1.341 = 2011.5 hp

Hours of operation: 2737 hr/yr

#### PM Emissions

Emission Factor: 0.0022 lb/hp-hr (AP-42, Table 3.3-1, 10/96)  
 Hourly Calculations:  $2011.5 \text{ hp} * 0.0022 \text{ lb/hp-hr} = 4.43 \text{ lb/hr}$   
 Daily Calculations:  $2011.5 \text{ hp} * 0.0022 \text{ lb/hp-hr} * 7.5 \text{ hr/day} = 33.19 \text{ lb/day}$   
 Annual Calculation:  $2011.5 \text{ hp} * 0.0022 * 2372 \text{ hr/yr} * 0.0005 \text{ lb/ton} = 6.06 \text{ ton/yr}$

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

Emission Factor: 0.0022 lb/hp-hr (AP-42, Table 3.3-1, 10/96)  
 Hourly Calculations:  $2011.5 \text{ hp} * 0.0022 \text{ lb/hp-hr} = 4.43 \text{ lb/hr}$   
 Daily Calculations:  $2011.5 \text{ hp} * 0.0022 \text{ lb/hp-hr} * 7.5 \text{ hr/day} = 33.19 \text{ lb/day}$   
 Annual Calculation:  $2011.5 \text{ hp} * 0.0022 * 2737 \text{ hr/yr} * 0.0005 \text{ lb/ton} = 6.06 \text{ ton/yr}$

**NOx Emissions:**

Emission Factor: 0.031 lb/hp-hr (AP-42, Table 3.3-1, 10/96)  
 Hourly Calculations:  $2011.5 \text{ hp} * 0.031 \text{ lb/hp-hr} = 62.36 \text{ lb/hr}$   
 Daily Calculations:  $2011.5 \text{ hp} * 0.031 \text{ lb/hp-hr} * 7.5 \text{ hr/day} = 467.67 \text{ lb/day}$   
 Annual Calculation:  $2011.5 \text{ hp} * 0.031 * 2737 \text{ hr/yr} * 0.0005 \text{ lb/ton} = 85.33 \text{ ton/yr}$

**VOC Emissions:**

Emission Factor: 0.00247 lb/hp-hr (AP-42, Table 3.3-1, 10/96)  
 Hourly Calculations:  $2011.5 \text{ hp} * 0.00247 \text{ lb/hp-hr} = 3.01 \text{ lb/hr}$   
 Daily Calculations:  $2011.5 \text{ hp} * 0.00247 \text{ lb/hp-hr} * 7.5 \text{ hr/day} = 37.26 \text{ lb/day}$   
 Annual Calculation:  $2011.5 \text{ hp} * 0.00247 * 2737 \text{ hr/yr} * 0.0005 \text{ lb/ton} = 6.80 \text{ ton/yr}$

**CO Emissions:**

Emission Factor: 0.00668 lb/hp-hr (AP-42, Table 3.3-1, 10/96)  
 Hourly Calculations:  $2011.5 \text{ hp} * 0.00668 \text{ lb/hp-hr} = 13.44 \text{ lb/hr}$   
 Daily Calculations:  $2011.5 \text{ hp} * 0.00668 \text{ lb/hp-hr} * 7.5 \text{ hr/day} = 100.78 \text{ lb/day}$   
 Annual Calculation:  $2011.5 \text{ hp} * 0.00668 * 2737 \text{ hr/yr} * 0.0005 \text{ lb/ton} = 18.39 \text{ ton/yr}$

**SOx Emissions:**

Emission Factor: 0.00205 lb/hp-hr (AP-42, Table 3.3-1, 10/96)  
 Hourly Calculations:  $2011.5 \text{ hp} * 0.00205 \text{ lb/hp-hr} = 4.12 \text{ lb/hr}$   
 Daily Calculations:  $2011.5 \text{ hp} * 0.00205 \text{ lb/hp-hr} * 7.5 \text{ hr/day} = 30.93 \text{ lb/day}$   
 Annual Calculation:  $2011.5 \text{ hp} * 0.00205 * 2737 \text{ hr/yr} * 0.0005 \text{ lb/ton} = 5.64 \text{ ton/yr}$

**Material Transfer**

Process Rate: 400 ton/hr  
 Number of Transfers 15 transfers  
 Hours of operation: 2737 hr/yr

**PM Emissions:**

Emission Factor: 0.00014 lb/ton (controlled) (AP-42, Table 11.19.2-2, 8/04)  
 Hourly Calculations:  $0.00014 \text{ lb/ton} * 400 \text{ ton/hr} * 15 \text{ transfers} = 0.84 \text{ lb/hr}$   
 Daily Calculations:  $0.84 \text{ lb/hr} * 7.5 \text{ hr/day} = 6.30 \text{ lb/day}$   
 Annual Calculations:  $0.84 \text{ lb/hr} * 2737 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 1.15 \text{ ton/yr}$

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

Emission Factor: 0.000046 lb/ton (controlled) (AP-42, Table 11.19.2-2, 8/04)  
 Hourly Calculations:  $0.000046 \text{ lb/ton} * 400 \text{ tons/hr} * 15 \text{ transfers} = 0.28 \text{ lb/hr}$   
 Daily Calculations:  $0.28 \text{ lb/hr} * 7.5 \text{ hr/day} = 2.07 \text{ lb/day}$   
 Annual Calculations:  $0.28 \text{ lb/hr} * 2737 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.38 \text{ ton/yr}$

**Pile Forming**

Process Rate: 400 ton/hr  
 Number of Piles 4 piles  
 Hours of operation: 2737 hr/yr

**PM Emissions:**

Emission Factor: 0.0032 lb/ton (controlled) (AP-42, Section 13.2.4, 1/95)  
 Hourly Calculations:  $0.0032 \text{ lb/ton} * 400 \text{ ton/hr} * 4 \text{ piles} = 5.12 \text{ lb/hr}$   
 Daily Calculations:  $5.12 \text{ lb/hr} * 7.5 \text{ hr/day} = 38.40 \text{ lb/day}$   
 Annual Calculations:  $5.12 \text{ lb/hr} * 2737 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 7.01 \text{ ton/yr}$

PM<sub>10</sub> Emissions:

Emission Factor:	0.0015 lb/ton	(AP-42, Section 13.2.4, 1/95)	
Hourly Calculations:	0.0015 lb/ton * 400 ton/hr * 4 piles =		2.40 lb/hr
Daily Calculations:	2.40 lb/hr * 7.5 hr/day =		18.0 lb/day
Annual Calculations:	2.40 lb/hr * 2737 hr/yr * 0.0005 ton/lb =		3.28 ton/yr

**Bulk Loading**

Process Rate:	400 ton/hr
Number of Loads	4 load
Hours of operation:	2737 hr/yr
Control Efficiency:	50%

PM Emissions:

Emission Factor:	0.0022 lb/ton	(AP-42, Table 11.19.2-2, 8/04)	
Hourly Calculations:	0.0022 lb/ton * 400 ton/hr =		0.88 lb/hr
Daily Calculations:	0.88 lb/hr * 7.5 hr/day =		6.60 lb/day
Annual Calculations:	0.88 lb/hr * 2737 hr/yr * 0.0005 ton/lb =		1.20 ton/yr

PM<sub>10</sub> Emissions:

Emission Factor:	0.00074 lb/ton	(AP-42, Table 11.19.2-2, 8/04)	
Hourly Calculations:	0.00074 lb/ton * 400 ton/hr =		0.296 lb/hr
Daily Calculations:	0.296 lb/hr * 7.5 hr/day =		2.22 lb/day
Annual Calculations:	0.296 lb/hr * 2737 hr/yr * 0.0005 ton/lb =		0.41 ton/yr

**Haul Roads**

Vehicle miles traveled:	4 VMT/day {Estimated}
Assumption:	Rated Load Capacity < 50 tons
Hours of Operation:	2737 hr/yr 7.5 hr/day

TSP Emissions:

Emission Factor:	13.90 lb/VMT (controlled)	(AP-42 Section 13.2.2, 12/03)	
Calculations:	4.0 VMT/day * 13.90 lb/VMT =		55.60 lb/day
	69.50 lb/day * 365 day/yr * 0.0005 ton/lb =		10.15 ton/yr

PM-10 Emissions:

Emission Factor:	3.95 lb/VMT (controlled)	(AP-42 Section 13.2.2, 12/03)	
Calculations:	4 VMT/day * 3.95 lb/VMT =		15.80 lb/day
	19.75 lb/day * 365 day/yr * 0.0005 ton/lb =		2.88 ton/yr

VII. Existing Air Quality

On July 1, 1987, the Environmental Protection Agency (EPA) promulgated new National Ambient Air Quality Standards (NAAQS) for PM<sub>10</sub>. Due to exceedances of the national standards for PM<sub>10</sub>, the cities of Kalispell (and the nearby Evergreen area), Columbia Falls, Butte, Whitefish, Libby, Missoula, and Thompson Falls were designated by EPA as nonattainment for PM<sub>10</sub>. As a result of this designation, EPA required the Department and the City-County Health Departments to submit PM<sub>10</sub> State Implementation Plans (SIP). The SIPs consisted of emission control plans that controlled fugitive dust emissions from roads, parking lots, construction, and demolition, since technical studies determined these sources to be the major contributors to PM<sub>10</sub> emissions.

Addendum #2 to MAQP #2673-05 is for a portable crushing/screening plant to locate at sites in or within 10 km of certain PM<sub>10</sub> nonattainment areas during the winter season (October 1 through March 31). Winter season (October 1 through March 31) operations may include only the locations listed in Section II.A of Addendum #1. Addendum #1 of MAQP #2673-05 would also allow for summertime operations (April 1 through September 30) at any location in or within 10 km of the Butte, Columbia Falls, Libby, Kalispell, Thompson Falls, and Whitefish PM<sub>10</sub> nonattainment areas.

### VIII. Air Quality Impacts

Helena Sand and Gravel is allowed to operate a portable crushing/screening plant to be located at various locations throughout Montana. MAQP #2673-05 and Addendum #1 will cover the Helena Sand and Gravel crushing/screening plant while operating at any location within Montana, excluding those counties that have a Department-approved permitting program and those areas considered tribal lands. In the view of the Department, the amount of controlled particulate emissions generated by this project will not cause concentrations of PM<sub>10</sub> in the ambient air that exceed the ambient air quality standards. In addition, this source is portable and any air quality impacts will be minimal.

### IX. Taking or Damaging Analysis

As required by 2-10-101 through 105, MCA, the Department conducted a private property taking and damaging assessment and determined there are no taking or damaging implications.

### X. 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

DRAFT ENVIRONMENTAL ASSESSMENT (EA)

*Issued To:* Helena Sand & Gravel

*Air Quality Permit Number:* 2673-05

*Preliminary Determination Issued:* April 12, 2007

*Department Decision Issued:*

*Permit Final:*

1. *Legal Description of Site:* Helena Sand & Gravel operates a portable crushing/screening facility that moves to various locations throughout Montana. Permit #2673-05 would apply to the source 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 km of certain PM<sub>10</sub> nonattainment areas. A Missoula County air quality permit would be required for locations within Missoula County, Montana. Addendum #1 to this air quality permit would allow Helena Sand & Gravel to operate at locations in or within 10 km of certain PM<sub>10</sub> nonattainment areas.
2. *Description of Project:* Helena Sand & Gravel submitted an application for the modification of Permit #2673-04 to replace the existing backup power generator with a 1500 kW unit, install a diesel fuel storage tank for the backup power generator, and to add a wash plant and an addendum.
3. *Objectives of Project:* The object of the project would be to increase production for business and revenue for the company through the sale and use of aggregate. The issuance of Permit #2673-05 would allow Helena Sand & Gravel to operate the permitted equipment at various locations throughout Montana.
4. *Alternatives Considered:* In addition to the proposed action, the Department also considered the “no-action” alternative. The “no-action” alternative would deny issuance of the air quality preconstruction permit to the proposed facility. However, the Department does not consider the “no-action” alternative to be appropriate because Helena Sand & Gravel has demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the “no-action” alternative was eliminated from further consideration.
5. *A Listing of Mitigation, Stipulations, and Other Controls:* A list of enforceable conditions, including a BACT analysis, would be included in Permit #2673-05.
6. *Regulatory Effects on Private Property:* The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.

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

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

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

A. Terrestrial and Aquatic Life and Habitats

Terrestrials would use the same area as the crushing and screening operation. The crushing and screening operation would be considered a minor source of emissions, by industrial standards, with intermittent and seasonal operations. Therefore, only minor effects on terrestrial life would be expected as a result of the increased size of equipment and associated pollutant deposition.

Impacts on aquatic life could result from storm water runoff and pollutant deposition, but such impacts would be minor as the facility would be a minor source of emissions (with seasonal and intermittent operations) and only minor amounts of water would be used for pollution control. Since only a minor amount of additional air emissions would be generated, only minor deposition would occur. Therefore, only minor and temporary effects to aquatic life and habitat would be expected from the proposed project.

B. Water Quality, Quantity and Distribution

Water would be used 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 impact to the water quality, quantity, and distribution in the area, since only small amounts of water would be required to control air pollutant emissions and deposition of air pollutants (as described in Section 7.F of this EA).

C. Geology and Soil Quality, Stability and Moisture

Because the modification would slightly increase emissions and the facility would typically operate in areas previously designated and used for aggregate crushing, impacts from the emissions from the crushing facility would be minor.

The crushing and screening operation would have only minor impacts on soils in any proposed site location (due to the construction and use of the crushing facility) because the facility is relatively small in size, would use only relatively small amounts of water for pollution control, and would only have seasonal and intermittent operations. Therefore, any affects upon geology and soil quality, stability, and moisture at any proposed operational site would be minor.

D. Vegetation Cover, Quantity, and Quality

Because the modification would slightly increase emissions and the facility would typically operate in areas previously designated and used for aggregate crushing, impacts from the emissions from the crushing and screening facility would be minor.

As described in Section 7.F of this EA, the amount of air emissions from this facility would be minor. As a result, the corresponding deposition of the air pollutants on the surrounding vegetation would also be minor. Also, because the water usage is minimal, as described in Section 7.B, and the associated soil disturbance is minimal, as described in Section 7.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 these areas. However, Permit #2673-05 would include conditions to control emissions, including visible emissions, from the plant. Also, because the crushing and screening operation is portable, would operate on an intermittent and seasonal basis, and would typically locate within an open-cut pit, any visual and noise impacts would be minor and short-lived. Therefore, impacts to the aesthetics of the area would be minor.

F. Air Quality

The air quality impacts from the crushing and screening operations would be minor because the facility is relatively small and this modification would only increase emissions slightly. Permit #2673-05 would include conditions limiting the opacity from the plant, as well as requiring water spray bars and other means to control air pollution. Further, Permit #2673-05 would limit total emissions from the crushing and screening operation and any additional Helena Sand & Gravel equipment operated at the site to 250 tons/year or less, excluding fugitive emissions.

This facility would be used on a temporary and intermittent basis, thereby further reducing potential air quality impacts from the facility. Additionally, the small and intermittent amounts of deposition generated from the crushing/screening operation would be minimal because the pollutants emitted would be well controlled, widely dispersed (from such factors as wind speed and wind direction) and would have minimal deposition on the surrounding area. Therefore, air quality impacts would be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

Given the relatively small size of the facility, the probability that the facility would locate in a previously disturbed area, and the temporary and portable nature of the operations, any impacts would be minor and short-lived. Additionally, operational conditions and limitations within Permit #2673-05 would aid in the protection of these resources by protecting the surrounding environment. Therefore, impacts to unique, endangered, fragile, or limited environmental resources would be minor.

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

Due to the size of the facility, the crushing and screening operation would require only small quantities of water, air, and energy for proper operation. Small quantities of water would be used for dust suppression and would control particulate emissions being generated at the site. Energy requirements would also be small because the energy demands of the crushing and screening operation would be relatively small and the facility would not be used continuously. The facility would have limited production, and would have seasonal and intermittent use. In addition, impacts to air resources would be minor because the source is small by industrial standards, with intermittent and seasonal operations, and because air pollutants generated by the facility would be widely dispersed. Therefore, any impacts to water, air, and energy resources in any given area would be minor.

#### I. Historical and Archaeological Sites

In an effort to identify any historical and archaeological sites located near the proposed project area, the Department contacted the Montana Historical Society, State Historic Preservation Office (SHPO). According to SHPO records, there are no previously recorded historic or archaeological sites within the proposed area. However, SHPO stated that the absence of cultural properties in the area does not mean that they do not exist, but may reflect a lack of previous cultural resource inventories in the area. The Department determined that the chance of the project impacting any historical and archaeological sites in the area would be minor due to the relatively small size of the project.

#### 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 facility would generate emissions of PM, PM<sub>10</sub>, NO<sub>x</sub>, CO, SO<sub>x</sub>, and VOC. However, additional emissions from the proposed project would be minor. Noise would also be generated from the site. Emissions and noise would cause minimal disturbance because the equipment is small and the facility would be expected to operate in areas designated and used for such operations. Additionally, this facility, in combination with the other emissions from equipment operations at the operational site, would not be permitted to exceed 250 tons per year of non-fugitive emissions. Overall, any cumulative or secondary impacts to the physical and biological aspects of the human environment would be minor.

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

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

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

**A. Social Structures and Mores**

The proposed project would cause no disruption to the social structures and mores in the area because the source is a minor source of emissions (by industrial standards) and would only have intermittent operations. Further, the facility would be required to operate according to the conditions that would be placed in Permit #2673-05. Thus, no native or traditional communities would be affected by the proposed project operations and no impacts upon social structures or mores would result.

**B. Cultural Uniqueness and Diversity**

The impact to cultural uniqueness and diversity of these areas would be minor from the proposed project because the site will be located on ground previously used as irrigated hay ground and is immediately adjacent to an existing gravel pit. Additionally, the facility would be considered a portable/temporary source with seasonal and intermittent operations. Therefore, the predominant use of the surrounding areas would experience a minor change as a result of this project.

**C. Local and State Tax Base and Tax Revenue**

The proposed project 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 be used on a seasonal and intermittent basis. The facility would require the use of only a few employees. Thus, only minor, if any, impacts to the local and state tax base and revenue could be expected from the employees and facility production. Furthermore, the impacts to local tax base and revenue would be minor because the source would also be portable and the money generated for taxes would be widespread.

**D. Agricultural or Industrial Production**

The proposed project would have only a minor impact on local industrial production since there would only be a slight increase in emissions and the facility is relatively small (by industrial standards). There could be minor effects on agricultural land from the deposition of pollutants (as described in Section 7.F of this EA) but, the facility operations would be small and temporary in nature, and would be permitted with operational conditions and limitations that would minimize impacts upon surrounding vegetation (as described in Section 7.D of this EA).

E. Human Health

Permit #2673-05 would incorporate conditions to ensure that the crushing facility would operate in compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health. As described in Section 7.F. of this EA, the air emissions from this facility would be minimized by the use of water spray and other conditions that would be established in Permit #2673-05, though the facility's air emissions would be quite small without the use of pollution controls. Therefore, only minor impacts would be expected upon human health from the proposed crushing/screening facility.

F. Access to and Quality of Recreational and Wilderness Activities

The crushing plant would typically operate within the confines of an open-cut pit. Therefore, only minor impacts upon the access to and quality of recreational and wilderness activities would result. Additionally, noise from the facility would be minor because the facility would typically operate within the confines of an existing open-cut pit. Also, the facility would operate on a seasonal and intermittent basis and would be relatively small by industrial standards. Therefore, any changes in the quality of recreational and wilderness activities created by operating the equipment at a given site would be expected to be minor and intermittent.

G. Quantity and Distribution of Employment

The proposed project would not require an increase in numbers of employees to operate. The crushing and screening operation is a small, portable source, with seasonal and intermittent operations and would not be expected to have any long-term effects upon the quantity and distribution of employment in any given area of operation. Therefore, no effects upon the quantity and distribution of employment in these areas would be expected.

H. Distribution of Population

The portable crushing and screening operation is small and would only require a few existing employees to operate. Also, no individuals would be expected to permanently relocate to a given area of operation as a result of operating the crushing facility, which would have only intermittent and seasonal operations. Therefore, the crushing facility would not disrupt the normal population distribution in a given area of operation.

I. Demands for Government Services

Minor increases would be seen in traffic on existing roadways in a given area while the crushing and screening operation is in progress. In addition, government services would be required for acquiring the appropriate permits from government agencies and determining compliance with the permits. Overall, the demands for government services would be minor.

J. Industrial and Commercial Activity

The crushing and screening operation would represent only a minor increase in the industrial activity in any given area because the source would be a minor source (relatively small in size by industrial standards) 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

The Department is not aware of any locally adopted environmental plans and goals that would affect Helena Sand & Gravel. The facility would be allowed, by permit, to operate in areas designated by EPA as attainment or unclassified. Permit #2673-05 would contain limits for protecting air quality and to keep facility emissions in compliance with any applicable ambient air quality standards. Because the facility would be a small and portable source, and would have intermittent and seasonal operations, any effects from the facility would be minor and short-lived.

L. Cumulative and Secondary Impacts

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

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

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permitting action is for the construction and operation of a portable crushing/screening facility. Permit #2673-05 includes conditions and limitations to ensure the facility will operate in compliance with all applicable rules and regulations. In addition, there are no significant impacts associated with this proposal.

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

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

EA prepared by: Julie Merkel  
Date: March 5, 2007