

AIR QUALITY PERMIT

Issued To: Jespersion Construction
P.O. Box 342
Ekalaka, MT 59324

Permit: # 3870-00
Application Complete: 9/20/06
Preliminary Determination Issued: 10/25/06
Department's Decision Issued: 11/13/06
Permit Final: 11/29/06
AFS #: 777-3870

An air quality permit, with conditions, is hereby granted to Jespersion Construction (Jespersion) pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended, for the following:

SECTION I: Permitted Facilities

A. Permitted Equipment:

Jespersion will operate a portable crushing and screening operation at various locations throughout Montana. This permit allows Jespersion to operate a crusher (up to 175 tons per hour (TPH)), a screen (up to 175 TPH), and a diesel generator (up to 125 kilowatts (kW)). A complete list of the permitted equipment is contained in Section I.A of the Permit Analysis.

B. Plant Location:

Jespersion will operate a portable crushing and screening facility initially located in Section 18, Township 1 North, Range 59 East in Carter County, Montana. Permit #3870-00 applies while operating at any location in Montana, except those areas having a Department of Environmental Quality (Department) approved permitting program, areas considered tribal lands, or areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* An addendum will be required for PM₁₀ nonattainment areas.

SECTION II: Conditions and Limitations

A. Emission Limitations

1. All visible emissions from any Standards of Performance for New Stationary Source (NSPS)-affected crusher shall not exhibit an opacity of 15% or greater averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart 000).
2. All visible emissions from any other NSPS-affected equipment, such as screens or conveyor transfers, shall not exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart 000).
3. All visible emissions from any non-NSPS affected equipment shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).
4. Water and spray bars shall be available on site at all times and operated as necessary to maintain compliance with the opacity limitations in Sections II.A.1, II.A.2, and II.A.3 (ARM 17.8.752).

5. Jespersion shall not cause or authorize to be discharged into the atmosphere from any street, road or parking lot any visible fugitive emissions that exhibit an opacity of 20% or greater (ARM 17.8.308 and ARM 17.8.752).
6. Jespersion shall treat all unpaved portions of the haul roads, access roads, parking lots, or the general plant area with water and/or chemical dust suppressant, as necessary, to maintain compliance with the reasonable precautions limitation in Section II.A.5 (ARM 17.8.749).
7. Jespersion shall operate one crusher and the maximum rated design capacity of the crusher shall not exceed 175 TPH (ARM 17.8.749).
8. Crushing production from the facility is limited to 1,533,000 tons during any rolling 12-month time period (ARM 17.8.749).
9. Jespersion shall operate one screen and the maximum rated design capacity of the screen shall not exceed 175 TPH (ARM 17.8.749).
10. Screening production is limited to 1,533,000 tons during any rolling 12-month time period (ARM 17.8.749).
11. Jespersion shall operate one diesel generator and the maximum rated design capacity shall be 125 kW or less (ARM 17.8.749).
12. If the permitted equipment is used in conjunction with any other equipment owned or operated by Jespersion, at the same site, production shall be limited to correspond with an emission level that does not exceed 250 tons during any rolling 12-month period. Any calculations used to establish production levels, shall be approved by the Department (ARM 17.8.749).
13. Jespersion shall comply with all applicable standards and limitations, and the reporting, recordkeeping, testing, and notification requirements contained in 40 CFR 60, Subpart OOO (ARM 17.8.340 and 40 CFR 60, Subpart OOO).

B. Testing Requirements

1. Within 60 days after achieving maximum production, but no later than 180 days after initial start-up, an Environmental Protection Agency (EPA) Method 9 opacity test and/or other methods and procedures as specified in 40 CFR 60.675 must be performed on all NSPS affected equipment to demonstrate compliance with the emission limitations contained in Section II.A.1 and II.A.2 (ARM 17.8.340 and 40 CFR 60, General Provisions and Subpart OOO).
2. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures manual (ARM 17.8.106).
3. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. If this crushing and screening plant is moved to another location, an 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 17.8.765).

2. Jespersion shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but not be limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

3. Jespersion 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 startup or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).
4. Jespersion 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 Jespersion as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).
5. Jespersion shall document, by month, the crushing production from the facility. By the 25th day of each month, Jespersion shall calculate the crushing production from the facility for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.8. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
6. Jespersion shall document, by month, the screening production from the facility. By the 25th day of each month, Jespersion shall calculate the screening production from the facility for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.10. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

D. Notification

Jespersion shall provide the Department with written notification of the actual start-up date of the new portable crushing and screening facility within 30 days after the actual start-up date (ARM 17.8.749).

SECTION III: General Conditions

- A. Inspection – Jespersion shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment 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 Jespersion fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Jespersion of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided for in ARM 17.8.740, *et seq.* (ARM 17.8.756)
- D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.
- F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by Department personnel at the location of the permitted source.
- G. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by Jespersion may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Construction Commencement – Construction must be begin within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked (ARM 17.8.762).
- I. The Department may modify the conditions of this permit based on local conditions of any future site. These factors may include, but are not limited to, local terrain, meteorological conditions, proximity to residences, etc.
- J. Jespersion shall comply with the conditions contained in this permit while operating in any location in Montana, except within those areas that have a Department approved permitting program.

Permit Analysis
Jespersion Construction
Permit # 3870-00

I. Introduction/Process Description

A. Permitted Equipment:

Jespersion Construction (Jespersion) owns and operates a portable crushing and screening facility consisting of the following equipment:

- Jaw Crusher (up to 175 tons per hour (TPH));
- Screen (up to 175 TPH);
- Diesel generator (up to 125 kilowatts (kW)); and
- Other associated equipment.

B. Source Description:

Jespersion proposes to use this crushing and screening facility to crush sand and gravel for use in various construction operations. For a typical operation setup, materials are conveyed to the screen for initial size reduction. Some material from the screen is sent to stockpile and material not ready for stockpile, will be crushed by the crusher. Material is separated by size and stockpiled.

II. Applicable Rules and Regulations

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

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

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.
3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source, or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

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

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.
5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to:

1. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
2. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
3. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
4. ARM 17.8.220 Ambient Air Quality Standard for Settled PM
5. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀

Jespersion must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 – Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and reasonable precautions must be taken to control emissions of airborne particulate matter (PM). (2) Under this rule, Jespersion shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.
3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this section.
4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter in excess of the amount set forth in this section.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this section.
6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank truck or trailer is equipped with a vapor loss control device as described in (1) of this rule.

7. ARM 17.8.340 Standard of Performance for New Stationary Sources. This rule incorporates, by reference, 40 CFR 60, Standards of Performance for New Stationary Sources (NSPS). The owner or operator of any stationary source or modification, as defined and applied in 40 CFR Part 60, NSPS, shall comply with the standards and provisions of 40 CFR Part 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants, that indicates NSPS requirements apply to crushing facilities with capacities greater than 150 TPH and crushing facilities constructed after August 31, 1983. Jespersion has a capacity in excess of 150 TPH and was constructed after August 31, 1983; therefore, NSPS requirements apply to the facility.

D. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. Jespersion submitted the appropriate permit application fee for the current permit action.
2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that pro-rate the required fee amount.

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

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit 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. Jespersion has a PTE greater than 15 tons per year of PM, and oxides of nitrogen (NO_x); therefore, an air quality permit is required.
3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.
4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.

5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, alteration, or use of a source. Jespersion submitted the required permit application for the current permit action. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Jespersion submitted an affidavit of publication of public notice in the June 16, 2006, issue of the *Ekalaka Eagle*, a newspaper of general circulation in Carter County, as proof of compliance with the public notice requirements.
6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that Best Available Control Technology (BACT) shall be utilized. The required BACT analysis is included in Section III of this permit analysis.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving Jespersion 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 the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a *de minimis*

change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.

14. ARM 17.8.765 Transfer of Permit. (1) This rule states that an air quality permit may be transferred from one location to another if the Department receives a complete notice of Intent to Transfer location, the facility will operate in the new location for less than 1 year, the facility will comply with the FCAA and the Clean Air Act of Montana, and the facility complies with other applicable rules. (2) This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

F. ARM 17.8, Subchapter 8 - Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
2. ARM 17.8.818 Review of Major Stationary Sources and Major Modification--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source since it is not a listed source and the facility's PTE is less than 250 tons per year of any pollutant (excluding fugitive emissions).

G. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any stationary source having:
 - a. PTE > 100 tons/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 lesser quantity as the Department may establish by rule, or
 - c. PTE > 70 tons/year of particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) in a serious PM₁₀ nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (1) Title V of the FCAA Amendments of 1990 requires that all sources, as defined in ARM 17.8.1204 (1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #3870-00 for Jespersion, the following conclusions were made:
 - a. The facility's PTE is less than 100 tons/year for any pollutant.
 - b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year of all HAPs.
 - c. This source is not located in a serious PM₁₀ nonattainment area.

- d. This facility is not subject to any current NESHAP standards.
- e. This source is not a Title IV affected source or a solid waste combustion unit.
- f. This source is not an EPA designated Title V source.

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

III. BACT Determination

A BACT determination is required for each new or altered source. Jesperson 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 Emissions and Crushing and Screening 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 and screening operation. These two control methods are water and chemical dust suppressant. Chemical dust suppressant could be used on the area surrounding the crushing and screening operation, and for emissions from the crushing and screening operation. However, because water is more readily available, is more cost effective, is equally effective as chemical dust suppressant, and is more environmentally friendly, 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. Jesperson may, however, use chemical dust suppressant to assist in controlling particulate emissions from the surrounding plant area.

Jesperson shall not cause or authorize to be discharged into the atmosphere from any NSPS affected crusher, any visible emissions that exhibit an opacity of 15% or greater averaged over 6 consecutive minutes. Also, Jesperson shall not cause or authorize to be discharged into the atmosphere from any affected screens, conveyor transfers, or other NSPS-affected equipment, any visible emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes. Further, Jesperson shall not cause or authorize to be discharged into the atmosphere from any non-NSPS affected equipment, any visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.

Jesperson 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. Jesperson 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. Jesperson may also use chemical dust suppression, in order to maintain compliance with emission limitations in Section II of Permit #3870-00. The Department determined that using water spray bars, water, and chemical dust suppressant to maintain compliance with the opacity requirements and reasonable precaution limitations constitutes BACT for the crushing/screening operation.

B. Diesel Generator

Due to the limited amount of emissions produced by the diesel generator/engine and the lack of readily available, cost effective add-on controls; add-on controls would be cost prohibitive. Therefore, the Department determined proper operation and maintenance with no add-on controls would constitute BACT for the diesel generator/engine.

The control options required for the proposed crushing and screening facility are comparable to other recently permitted similar sources, and are capable of achieving the appropriate emission standards.

IV. Emission Inventory

Source	Tons/Year (TPY)					
	PM	PM ₁₀	NO _x	VOC	CO	SO _x
Crusher (up to 175 TPH)	0.92	0.41				
Screen (up to 175 TPH)	1.69	0.57				
Material Transfer	0.75	0.25				
Pile Forming	7.36	3.45				
Bulk Loading	0.01	0.01				
Diesel Generator (125 kW)	1.62	1.25	22.76	1.81	4.99	1.84
Haul Roads	13.9	3.95				
Total	26.25	9.89	22.76	1.81	4.99	1.84

Crusher (up to 175 TPH)

Process Rate: 175 ton/hr
Hours of Operation: 8760 hr/yr

PM Emissions:

Emission Factor: 0.0012 lbs/ton Controlled (AP-42, Table 11.19.2-2, 8/2004)

Calculations: 0.0012 lbs/ton * 175 ton/hr = 0.21 lb/hr
0.21 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.9198 ton/yr

PM-10 Emissions:

Emission Factor: 0.00054 lbs/ton Controlled (AP-42, Table 11.19.2-2, 8/2004)

Calculations: 0.00054 lbs/ton * 175 ton/hr = 0.09 lb/hr
0.0945 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.41391 ton/yr

Screen (up to 175 TPH)

Process Rate: 175 ton/hr
Hours of Operation: 8760 hr/yr

PM Emissions:

Emission Factor: 0.0022 lbs/ton Controlled (AP-42, Table 11.19.2-2, 8/2004)

Calculations: 0.0022 lbs/ton * 175 ton/hr = 0.39 lb/hr
0.385 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 1.6863 ton/yr

PM-10 Emissions:

Emission Factor: 0.00074 lbs/ton Controlled (AP-42, Table 11.19.2-2, 8/2004)

Calculations: 0.00074 lbs/ton * 175 ton/hr = 0.13 lb/hr
0.1295 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.56721 ton/yr

Material Transfer

Process Rate: 175 ton/hr
Number of Transfers: 7 Transfers
Hours of Operation: 8760 hr/yr

PM Emissions:

Emission Factor: 0.00014 lbs/ton Controlled (AP-42, Table 11.19.2-2, 8/2004)
Calculations: $0.00014 \text{ lbs/ton} * 175 \text{ ton/hr} * 7 \text{ Transfers} = 0.17 \text{ lb/hr}$
 $0.1715 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.75117 \text{ ton/yr}$

PM-10 Emissions:

Emission Factor: 0.000046 lbs/ton Controlled (AP-42, Table 11.19.2-2, 8/2004)
Calculations: $0.000046 \text{ lbs/ton} * 175 \text{ ton/hr} * 7 \text{ Transfers} = 0.06 \text{ lb/hr}$
 $0.05635 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.246813 \text{ ton/yr}$

Pile Forming (3 piles)

Process Rate: 175 ton/hr
Number of Piles: 3 Piles
Hours of Operation: 8760 hr/yr

PM Emissions:

Emission Factor: 0.0032 lbs/ton Controlled (AP-42, Section 13.2.42, 1/1995)
Calculations: $0.0032 \text{ lbs/ton} * 175 \text{ ton/hr} * 3 \text{ Piles} = 1.68 \text{ lb/hr}$
 $1.68 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 7.36 \text{ ton/yr}$

PM-10 Emissions:

Emission Factor: 0.0015 lbs/ton Controlled (AP-42, Section 13.2.4, 1/1995)
Calculations: $0.0015 \text{ lbs/ton} * 175 \text{ ton/hr} * 3 \text{ Piles} = 0.79 \text{ lb/hr}$
 $0.7875 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 3.45 \text{ ton/y}$

Bulk Loading

Process Rate: 175 ton/hr
Number of Loads: 1 Load
Hours of Operation: 8760 hr/yr

PM Emissions:

Emission Factor: 1.60E-05 lbs/ton (AP-42, Section 11.19, 8/2004)
Calculations: $0.000016 \text{ lbs/ton} * 175 \text{ ton/hr} * 1 \text{ Load} = 0.0028 \text{ lb/hr}$
 $0.0028 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.0123 \text{ ton/yr}$

PM-10 Emissions:

Emission Factor: 1.60E-05 lbs/ton (AP-42, Section 11.19, 8/2004)
Calculations: $0.000016 \text{ lbs/ton} * 175 \text{ ton/hr} * 1 \text{ Load} = 0.0028 \text{ lb/hr}$
 $0.0028 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.0123 \text{ ton/y}$

Diesel Generator

Generator Size = 125 kW
1kW = 1,341 hp
 $125 \text{ kW} * 1.341 = 167.6 \text{ hp}$
7000 Btu = 1 Hp-hr

Hours of Operation: 8760 hr/yr

Pm Emissions

Emission Factor: 0.0022 lb/hp-hr (AP-42 Table 3.3-1, 10/1996)
Calculations: $167.625 \text{ hp} * 0.0022 \text{ lb/hp-hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 1.62 \text{ ton/yr}$

Pm-10 Emissions

Emission Factor: 0.0022 lb/hp-hr (AP-42 Table 3.3-1, 10/1996)
Calculations: $167.625 \text{ hp} * 0.0022 \text{ lb/hp-hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 1.25 \text{ ton/yr}$

NO_x Emissions

Emission Factor: 0.0310 lb/hp-hr (AP-42 Table 3.3-1, 10/1996)
Calculations: $167.625 \text{ hp} * 0.031 \text{ lb/hp-hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 22.76 \text{ ton/yr}$

VOC Emissions

Emission Factor: 0.00247 lb/hp-hr (AP-42 Table 3.3-1, 10/1996)
Calculations: $167.625 \text{ hp} * 0.00247 \text{ lb/hp-hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 1.81 \text{ ton/yr}$

CO Emissions

Emission Factor: 0.00680 lb/hp-hr (AP-42 Table 3.3-1, 10/1996)
Calculations: $167.625 \text{ hp} * 0.0068 \text{ lb/hp-hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 4.99 \text{ ton/yr}$

SO_x Emissions

Emission Factor: 0.00250 lb/hp-hr (AP-42 Table 3.3-1, 10/1996)
Calculations: $167.625 \text{ hp} * 0.0025 \text{ lb/hp-hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 1.84 \text{ ton/yr}$

Haul Roads

Vehicle Miles Traveled: 5 VMT/day (Estimated)
Control Efficiency Included in Emission Factor

PM Emissions:

PM Emissions Factor (Rated Load Capacity <50 Tons): 13.90 lbs/VMT (AP-42, Section 13.2.2, 12/2003)
PM = (5VMT/day)(13.90 lb/VMT)
PM = 34.75 lbs/day
6.34 ton/yr

PM-10 Emissions:

PM-10 Emissions Factor (Rated Load Capacity <50 Tons): 3.95 lbs/VMT (AP-42, Section 13.2.2, 12/2003)
PM-10 = (5VMT/day)(3.95 lb/VMT)
PM-10 = 9.88 lbs/day
1.80 ton/yr

V. Air Quality Impacts

Permit #3870 is issued for a portable crushing and screening plant to be located at various locations around Montana. The permit contains operation conditions and limitations that would protect air quality for the site and surrounding area. Because this facility is a portable source that would operate on an intermittent and temporary basis, any effects to air quality will be minor. Further, the Department believes that the amount of controlled emissions generated by this project will not exceed any ambient air quality standard.

VI. Taking or Damaging Implication 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.

VII. Environmental Assessment

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

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

FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued To: Jespersion Construction
P.O. Box 342
Ekalaka, MT 59324

Air Quality Permit number: 3870-00

Preliminary Determination Issued: 10/25/06

Department Decision Issued: 11/13/06

Permit Final: 11/29/06

1. **Legal Description of Site:** Permit #3870-00 applies 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 areas in or within 10 kilometers (km) of certain PM₁₀ nonattainment areas. A Missoula County air quality permit will be required for locations within Missoula County, Montana. An addendum will be required for locations in or within 10 km of certain PM₁₀ nonattainment areas.
2. **Description of Project:** Jespersion will operate a portable crushing and screening operation in various locations throughout Montana. This permit allows Jespersion to operate a crusher (up to 175 TPH), screen (up to 175 TPH), diesel generator (125 kW), and associated equipment.
3. **Objectives of Project:** The objective of this project would be to produce business and revenue for Jespersion through the sale and use of aggregate. The issuance of the permit would allow Jespersion to operate the permitted equipment at various locations throughout Montana, including the proposed initial site location.
4. **Alternatives Considered:** In addition to the proposed action, the Department also considered the “no-action” alternative. The “no-action” alternative would deny issuance of the air quality preconstruction permit to the proposed facility. However, the Department does not consider the “no-action” alternative to be appropriate because Jespersion 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 #3870-00.
6. **Regulatory Effects on Private Property:** The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.

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

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

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

A. Terrestrial and Aquatic Life and Habitats

There is a possibility that terrestrials would use the same area as the crushing and screening operation. Impacts on terrestrials and aquatic life could result from storm water runoff and pollutant deposition, but such impacts would be minor, as the crushing and screening operations would be considered a minor source of emissions and would have intermittent and seasonal operations. Furthermore, the air emissions would have only minor effects on terrestrial and aquatic life because facility emissions would have good pollutant dispersion in the area of operations. Therefore, only minor and temporary effects to terrestrial and aquatic life and habitat would be expected from the proposed project.

B. Water Quality, Quantity and Distribution

Water will be required for dust suppression on the surrounding roadways, at areas of operation, and as pollution control for equipment operations. However, pollutant deposition and water use would cause minor impacts, if any, to water resources in these areas because the facility is small with seasonal and intermittent operation. Only a small volume of water would be used for pollution control. Overall, the additional equipment would have minor impacts to water quality, quantity, and distribution in the area of operations.

C. Geology and Soil Quality, Stability and Moisture

The proposed project would have minor impacts on geology, soil quality, stability, and moisture of soils. Minor impacts from deposition of air pollutants on soils would result and minor amounts of water would be used for pollution control of particulate emissions. Thus, minimal water runoff would occur. Since a small amount of pollution would be generated and corresponding emissions would be widely dispersed before settling upon vegetation and surrounding soils, impacts would be minor. Therefore, any effects upon geology and soil quality, stability, and moisture from air pollutant emissions from equipment and operation would be minor and short-term.

D. Vegetation Cover, Quantity, and Quality

The facility would be considered a minor source of emissions by industrial standards and would typically operate in remote areas previously designated and used for this type of operation. The overall footprint of the facility will be small, so the affect to quantity and quality of vegetative cover in the area would be minimal. There is one known species of concern located near or within the project area, the Narrowleaf Penstemon (vascular plant). However, there are other species located within three miles of the site that are considered a sensitive species of concern by the Montana Natural Heritage Program (MNHP) including: Barr's Milkvetch and Longleaf Dropseed (vascular plants).

In addition, water use at the facility, soil disturbance from water application, and the associated runoff would also be minimal. Because of the portable and temporary nature of the project, the impacts will be short-term and minor.

E. Aesthetics

The crushing and screening operation would be visible to others, and would produce noise. However, according to the applicant, the nearest house is located approximately two miles from the pit. Permit #3870-00 would include conditions to control emissions, including visible emissions from the operation. In addition, the crushing and screening operation would be portable, would operate on an intermittent and seasonal basis, and would be considered a small industrial source. Therefore, any disturbance to the aesthetic value of the area would be minor.

F. Air Quality

The Department believes emissions from the source would not cause or contribute to a violation of any ambient air quality standard. Although deposition of pollutants would occur as a result of operating the facility, the Department determined that the impacts from deposition of pollutants would be minor due to dispersion characteristics of pollutants (stack height, stack temperature, etc.) and atmospheric conditions (wind speed, wind direction, ambient temperature, etc.). Because the facility would be relatively small and operate on an intermittent basis, any impacts to air quality from the proposed facility would be minor.

Further, the Department determined that the crushing and screening facility would be a minor source of emissions as defined under the Title V Operating Permit Program because the source's PTE was below the major source threshold level of 100 tons per year for any regulated pollutant. Although deposition of pollutants would occur as a result of operating the facility, the Department determined that the impacts from deposition of pollutants would be minor due to dispersion characteristics of pollutants (stack height, stack temperature, etc.) and atmospheric conditions (wind speed, wind direction, ambient temperature, etc.). Overall, any impacts to air quality from the proposed crushing and screening facility would be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The Department, in an effort to assess any potential impacts to any unique endangered, fragile, or limited environmental resources in the proposed area of operation (Section 18, Township 1 South, Range 5 East in Carter County, Montana), contacted MNHP. The search area, in this case, is defined by the township and range of the proposed site, with an additional one-mile buffer. Search results concluded there would be potential for Barr's Milkvetch (vascular plant species) and the Northern Goshawk (vertebrate animal) to be located near the proposed project area. Both species are designated as sensitive by MNHP, however, the Department believes it is highly unlikely the species of concern would be located within the operational area of the project.

Because of the portable nature of the crushing and screening operation and the fact that there would be minimal disturbance of the property and the surroundings, the Department has determined that there will be minor impacts to the unique, endangered, fragile, or limited environmental resources in the area.

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

The proposed equipment would require an additional small quantity of water, air, and energy for the project. A minimal volume of water would be required for dust suppression of emissions being generated at the site. Impacts to air resources would be minimal because the source is considered a minor industrial source of emissions with intermittent and seasonal operations. Energy requirements would also be relatively small, as the facility would be powered by an industrial diesel generator engine.

Given the characteristics and the concentration of pollutants emitted, impacts on water, air and energy resources in the proposed project area would be minor due to the dispersion characteristics of pollutants.

I. Historical and Archaeological Sites

The Department contacted the Montana Historical Society, State Historical Preservation Office (SHPO) in an effort to identify any historical and archaeological sites that may be present in the proposed area of construction and operation. Search results concluded that there are no previously recorded historical or archaeological resources of concern within the proposed area. According to the SHPO, there would be a low likelihood of adverse disturbance to any known archaeological or historic site. Therefore, no impacts upon historical or archaeological sites would be expected as a result of operating the proposed crushing and screening plant.

J. Cumulative and Secondary Impacts

The crushing and screening facility would cause minor cumulative or secondary impacts to the physical and biological aspects of the human environment because the equipment would generate relatively small amounts of emissions of PM, PM₁₀, NO_x, CO, VOC, and SO_x. Emissions and noise generated from the equipment would, at most, result in only minor impacts to the area of operations because the crushing and screening plant would be relatively small, seasonal, and temporary. The proposed project would be short-term in nature, and have minor cumulative effects upon resources within the area. Overall, cumulative and 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 not cause any disruption to the social structures and mores in the area because the source would be a minor industrial source of emissions, and would only have temporary and intermittent operations. Further, the facility would be required to operate according to the conditions placed on Permit #3870-00 that would limit the effects to social structures and mores.

B. Cultural Uniqueness and Diversity

The facility is located on private land, the footprint of the project will be minor, and predominant use of the area would remain the same. The cultural uniqueness and diversity of this area would not be impacted by the proposed project because the facility would be a portable source, with seasonal and intermittent operations. Therefore, the cultural uniqueness and diversity of the area would not be affected.

C. Local and State Tax Base and Tax Revenue

The proposed project would result in minor, if any, impacts to the local and state tax base and tax revenue because the proposed project would only require one employee. In addition, only minor amounts of construction would be required to complete the project, and the facility would be a minor source of emissions with seasonal and intermittent operations. The proposed project would have only a minor, if any, impact to the tax base and tax revenue for local or State government.

D. Agricultural or Industrial Production

The proposed project would have a minor impact on local industrial production since the facility would increase aggregate production and air emissions slightly. The facility is located on private land and the mining process would be contained to less than 3 acres. Because minimal deposition of air pollutants would occur on the surrounding land (as described above in Section 7.F), only minor and temporary effects on the surrounding vegetation or agricultural production would occur. In addition, 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.

E. Human Health

Conditions would be incorporated into Permit #3870-00 to ensure the crushing and screening facility would operate in compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health. The air emissions from this project would be minimized by the use of water spray and other process limits that would be required of Permit #3870-00. Further, the facility would operate on an intermittent and seasonal basis and only minor impacts would be expected on human health from the proposed facility.

F. Access to and Quality of Recreational and Wilderness Activities

Access to recreational opportunities will not be limited by this facility. All recreational opportunities, if available in the area, will still be accessible. Noise from the facility would be minimal to surroundings because of the facility size, hours of operation, and rural location. The facility would operate on a seasonal and intermittent basis on private land and would be a minor industrial source of emissions. Therefore, any changes in the quality of recreational and wilderness activities created by operating the equipment at this site would be minor.

G. Quantity and Distribution of Employment

This portable crushing and screening operation would be relatively small and considered a minor source of pollution by industry standards. As proposed Jespersen would only employ one person, so impacts to employment will be minimal. In addition, the project would be considered a portable source with seasonal and intermittent operations. Therefore, there would be no known effects upon the quantity and distribution of employment in this area.

H. Distribution of Population

As proposed, the portable crushing and screening operation would only employ one person. No individuals would be relocated to the area of operation as a result of the project. Therefore, the facility would not impact the population distribution in the area of operation or any future operating site.

I. Demands for Government Services

There would be no increase in traffic on existing roadways and highways in the area from the proposed project. Government services would be required for acquiring the appropriate permits for the proposed project and to verify compliance with the permits that would be issued. However, demands for government services would be minor due to the relatively small size and seasonal nature of the crushing and screening facility.

J. Industrial and Commercial Activity

The proposed project would represent only a minor increase in the industrial activity in the proposed area of operation because the facility would be a small industrial source, would be portable and temporary in nature. No additional industrial or commercial activity would be expected as a result of the proposed operation. Therefore, any impacts to the industrial and commercial activity would be minor.

K. Locally Adopted Environmental Plans and Goals

Jespersion would be allowed by Permit #3870-00 to operate in areas designated by EPA as attainment or unclassified for ambient air quality. An addendum would be required to operate in or within 10 km of a PM₁₀ nonattainment area. Permit #3870-00 would contain limits to protect air quality and to keep facility emissions in compliance with applicable ambient air quality standards. Because the facility is small and portable, any impacts from the project would be minor and short-lived.

L. Cumulative and Secondary Impacts

Overall, the proposed project would cause minor cumulative and secondary impacts to the social and economic aspects of the human environment in the immediate area of operation because the source would continue to be portable, and the footprint of the facility would remain relatively small. Further, no other industrial operations are expected to result from this permitting action. Any increase in traffic would have minor effects on local traffic in the immediate area.

This facility may be operated in conjunction with other equipment owned and operated by Jespersen, but any cumulative impacts or secondary impacts would be minor and short-term. In conclusion, the source is relatively small, the facility emissions will be minimal, and the project would have only minor cumulative and secondary impacts.

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 to operate a crushing and screening facility to crush sand and gravel for use in various construction operations. Permit #3870-00 includes conditions and limitations to ensure the facility will operate in compliance with all applicable rules and regulations. In addition, there are no significant impacts associated with this proposal.

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

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

EA prepared by: Jenny O'Mara
Date: October 18, 2006