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December 6, 2011

Mr. Brian Midboe  
Bay Materials, LLC  
P.O. Box 1077  
Shelby, MT 59474

Dear Mr. Midboe:

Montana Air Quality Permit #4686-00 is deemed final as of December 6, 2011, by the Department of Environmental Quality (Department). This permit is for a portable aggregate wash plant and associated equipment and associated equipment. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,

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

Doug Kuenzli  
Environmental Science Specialist  
Air Resources Management Bureau  
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VW:DCK  
Enclosure

Montana Department of Environmental Quality  
Permitting and Compliance Division

Montana Air Quality Permit #4686-00

Bay Materials, LLC  
P.O. Box 1077  
Shelby, MT 59474

December 6, 2011



## MONTANA AIR QUALITY PERMIT

Issued To: Bay Materials, LLC  
P.O. Box 1077  
Shelby, MT 59474

MAQP: #4686-00  
Application Complete: 09/30/2011  
Preliminary Decision Issued: 11/01/2011  
Department's Decision Issued: 11/18/2011  
Permit Final: 12/06/2011  
AFS #: 777-4686

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Bay Materials, LLC (Bay) 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

Bay proposes to operate a portable non-metallic mineral wash plant and associated equipment. A complete list of permitted equipment is contained in Section I.A of the permit analysis.

#### B. Plant Location

The initial location of the proposed portable crushing and screening operation will be the SW ¼ of the SE ¼ of Section 22, Township 35 North, Range 3 West, in Toole County, Montana. However, MAQP #4686-00 applies while operating at any location in Montana, except those areas having a Montana Department of Environmental Quality (Department)-approved permitting program, areas considered tribal lands, or areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.*

### SECTION II: Conditions and Limitations

#### A. Emission Limitations

1. Bay shall not cause or authorize to be discharged into the atmosphere from the wash plant or any associated activities any emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).
2. Bay shall not cause or authorize the use of any street, road or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).
3. Bay 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).
4. Water and spray bars shall available on site and used , as necessary, to maintain compliance with the opacity limitations in Sections II.A.1, II.A.2, and II.A.3 (ARM 17.8.308 and ARM 17.8.752).
5. Bay shall not operate or have on-site more than one (1) diesel-fired engine with a maximum rated capacity not to exceed 425 horsepower (hp) (ARM 17.8.749 ).

6. Operation of the diesel-fired generator shall not exceed 6,000 hours during any rolling 12-month time period (ARM 17.8.749).
7. If the permitted equipment is used in conjunction with any other equipment owned or operated by Bay, 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).
8. Bay shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart III, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* and 40 CFR 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, for any applicable diesel engine (ARM 17.8.340; 40 CFR 60, Subpart III; ARM 17.8.342 and 40 CFR 63, Subpart ZZZZ).

B. Testing Requirements

1. All compliance source tests shall conform to the requirements of 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 this crushing/screening plant is moved to another location, an Intent to Transfer form must be sent to the Department and a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.749 and ARM 17.8.765).
2. Bay shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but not be limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

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

3. Bay shall notify the Department of any construction or improvement project conducted, pursuant to ARM 17.8.745, that would include ***the addition of a new emissions unit***, change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation. The notice must be submitted to the Department, in writing, 10 days prior to startup or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).

4. Bay 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 Bay 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. Bay shall document, by month, the hours of operation of the diesel-fired engine generator. By the 25<sup>th</sup> day of each month, Bay shall calculate the hours of operation of the generator for the previous month. The monthly information will be used to demonstrate compliance with the rolling 12-month limitation in Section II.A.6. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

D. Notification

Bay shall provide the Department with written notification of the actual start-up date of the plant postmarked within 15 days after the actual start-up date (ARM 17.8.749).

SECTION III: General Conditions

- A. Inspection – Bay shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (Continuous Emissions Monitoring System (CEMS), Continuous Emissions Rate Monitoring System (CERMS)) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if Bay fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Bay of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided for in ARM 17.8.740, *et seq.* (ARM 17.8.756).
- D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.
- F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by Department personnel at the location of the permitted source.

- G. Air Quality Operation Fees – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by Bay may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Duration of Permit – Construction or installation must begin or contractual obligations entered into that would constitute substantial loss within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (ARM 17.8.762).
- I. The Department may modify the conditions of this permit based on local conditions of any future site. These factors may include, but are not limited to, local terrain, meteorological conditions, proximity to residences, etc.
- J. Bay shall comply with the conditions contained in this permit while operating in any location in Montana, except within those areas that have a Department-approved permitting program or areas considered tribal lands.

Montana Air Quality Permit (MAQP) Analysis  
Bay Materials, LLC  
MAQP #4686-00

I. Introduction/Process Description

Bay Materials, LLC (Bay) owns and operates a portable wash plant with a maximum rate design throughput of 120 tons per hour.

A. Permitted Equipment

The following list of permitted equipment is based on information provided within the initial permit application and is provided for reference. Some operational flexibility is allowed, whereby alternate equipment may be utilized. See Section II of the MAQP for specific equipment limitations and/or conditions. Equipment permitted under this action consists of the following;

- 2010 Powerscreen Fines Master 120 Portable Wash Plant;
- 2009 Caterpillar 3406C 475 hp diesel fired generator [Tier 1]; and
- Associated material handling equipment

The diesel-fired engine associated with this facility is an EPA certified Tier 1 engine pursuant to 40 Code of Federal Regulations (CFR) 89.112. However, Bay requested that the permit be written in a de minimis friendly manner while maintaining emissions below a level that would necessitate dispersion modeling; thus avoiding any ancillary permit conditions that pertain to the diesel engines (i.e. minimum stack height requirements). To meet this criterion and integrate the most operational flexibility, permit conditions and the emission inventory are based on the operation of a non-certified diesel engine generator set.

B. Source Description

Bay will utilize this portable wash plant to wash and sort sand and small diameter materials for use in various construction projects. For a typical operational setup, unprocessed materials are loaded into the feed hopper where the materials are then fed into the water filled reservoir where a bucket wheel provides agitation to remove silts, slimes, and clays from saleable sand. A fines screen and centrifugal action is employed to separate materials. Sand exiting the system is stockpiled while undesirable material is entrained in wash water and discharged to a settling pond.

Bay proposes to initially locate this mineral processing operation at the SW ¼ of the SE ¼ of Section 22, Township 35 North, Range 3 West, in Toole County, Montana. This initial location proposed shall be designated as the operations' home-pit.

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).

Bay 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 (SO<sub>2</sub>)
2. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
3. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide (CO)
4. ARM 17.8.211 Ambient Air Quality Standards for Ozone
5. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter (PM)
6. ARM 17.8.221 Ambient Air Quality Standard for Visibility
7. ARM 17.8.223 Ambient Air Quality Standard for Particulate Matter with an Aerodynamic Diameter of 10 Microns or Less (PM<sub>10</sub>)

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

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

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions are taken to control emissions of airborne particulate matter. (2) Under this rule, Bay shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.

3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this section.
4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter in excess of the amount set forth in this section.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this section.
6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank truck or trailer is equipped with a vapor loss control device as described in (1) of this rule.
7. ARM 17.8.340 Standard of Performance for New Stationary Sources. This rule incorporates, by reference, 40 Code of Federal Regulations (CFR) Part 60, Standards of Performance for New Stationary Sources (NSPS). Based on the information submitted by Bay the portable crushing/screening operation and associated equipment are subject to NSPS (40 CFR 60), as follows:
  - a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to an NSPS Subpart as listed below:
  - b. 40 CFR 60, Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants. In order for a crushing/screening plant to be subject to NSPS requirements, two specific criteria must be met. First, the crushing/screening plant must meet the definition of an affected facility and, second, the equipment in question must have been constructed, reconstructed, or modified after August 31, 1983. The provisions of Subpart OOO do not apply to wet processing operations; therefore Bay is not subject to this NSPS.
  - c. 40 CFR 60, Subpart III - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE). Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006, and are not fire pump engines, and owners and operators of stationary CI ICE that modify or reconstruct their stationary CI ICE after July 11, 2005, are subject to this subpart.

Based on the information submitted by Bay, the diesel-fired engine associated with this permit is not subject to this Subpart as the manufactured date was after the effective date. However, due to the operational flexibility afforded de minimis friendly permits future engines may apply depend upon the location and nature of operation.

8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. This rule incorporates, by reference, 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories. Bay may be considered an NESHAP-affected facility under 40 CFR Part 63 and is potentially subject to the requirements of the following subparts.

- a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to a NESHAPs Subpart as listed below.
- b. 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Reciprocating Internal Combustion Engines (RICE). An owner or operator of a stationary RICE at a major or area source of Hazardous Air Pollutant (HAP) emissions is subject to this rule except if the stationary RICE is being tested at a stationary RICE test cell/stand. An area source of HAP emissions is a source that is not a major source.

Based on the information submitted by Bay, the RICE equipment to be used under MAQP #4686-00 may be subject to this subpart as the facility is an area source of HAP emissions and the engines have the potential to meet the definition of stationary RICE, depending upon the location and nature of operation.

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. Bay submitted the appropriate permit application fee for the current permit action.
2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department; the air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

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

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

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit modification to construct, modify, or use any asphalt plant, crusher, screen, or other portable source that has the potential to emit (PTE) greater than 15 tons per year (tpy) of any pollutant. Bay has a PTE greater than 15 tpy of oxides of nitrogen (NO<sub>x</sub>), therefore, an air quality permit is required.
3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.

4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. Bay 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. Bay submitted an affidavit of publication of public notice for the September 22, 2011 issue of the *Great Falls Tribune*, a newspaper of general circulation in the City of Great Falls in Cascade County, as proof of compliance with the public notice requirements.
6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section III of this permit analysis.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving Bay of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or modified source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.
12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions.

The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.

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

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

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

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

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

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any stationary source having:
  - a. PTE > 100 tpy of any pollutant;
  - b. PTE > 10 tpy of any single HAP, PTE > 25 tpy of any combination of HAPs, or lesser quantity as the Department may establish by rule; or
  - c. PTE > 70 tpy of PM<sub>10</sub> in a serious PM<sub>10</sub> nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (1) Title V of the FCAA Amendments of 1990 requires that all sources, as defined in ARM 17.8.1204 (1), obtain a Title V Operating Permit. In review and issuance of MAQP #4686-00 for Bay, the following conclusions were made:
  - a. The facility's PTE is greater than 100 tpy for NO<sub>x</sub>. Bay has requested that federally-enforceable permit operating limits be established to maintain the facility's PTE to less than the 100 tpy threshold.
  - b. The facility's PTE is less than 10 tpy for any single HAP and less than 25 tpy of combined HAPs.

- c. This source is not located in a serious PM<sub>10</sub> nonattainment area.
- d. This facility is not subject to a current NSPS.
- e. This facility is potentially subject to a current NESHAP standard (40 CFR 63, Subpart A and Subpart ZZZZ).
- f. This source is not a Title IV affected source.
- g. This source is not a solid waste combustion unit.
- h. This source is not an EPA designated Title V source.

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

### III. BACT Determination

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

A BACT analysis accompanied the permit application submitted by Bay, addressing available methods of controlling emissions from operation of the crushing and screening operation. The Department has reviewed these methods, as well as previous BACT determinations. The following control options have been reviewed by the Department in order to make the following BACT determinations.

The control options selected contain control equipment and control costs comparable to other recently permitted similar sources and are capable of achieving the appropriate emission standards.

#### A. Crushing/Screening Particulate Emissions

Two types of emission controls are readily available and used for dust suppression of fugitive emissions that result from the operation of crushing/screening equipment and associated activities. These two control methods are water and chemical dust suppressant. Chemical dust suppressant could be used on the area surrounding the crushing/screening operation, and for emissions from the crushing/screening operation itself. However, in view of the fact that water is more readily available, more cost effective, is equally effective as chemical dust suppressant, while presenting less potential environmental quality degradation, water has been identified as the most appropriate method of pollution control of particulate emissions. In addition, water suppression has been required of recently permitted similar sources. However, Bay may use chemical dust suppressant to assist in controlling particulate emissions.

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

or greater averaged over 6 consecutive minutes for equipment that commences construction, modification, or reconstruction after April 22, 2008, and 10% for equipment that commences construction, modification, or reconstruction after August 31, 1983, but before April 22, 2008. Finally, Bay 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

Bay 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 restrictions and reasonable precautions limitations. Bay may also use chemical dust suppressant to maintain compliance with emissions limitations in Section II.A. of MAQP #4686-00. 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 operation for the additional equipment.

The control options selected contain control equipment and control costs comparable to other recently permitted similar sources and are capable of achieving the appropriate emission standards.

#### B. Diesel Engines

Due to the limited amount of emissions produced by the diesel engines used in association with MAQP #4686-00 and the lack of cost effective add-on controls, add-on controls would be cost prohibitive. Therefore, the Department determined that proper operation and maintenance with no add-on controls would constitute BACT for the diesel engine.

In addition, any new diesel engine would likely be required to comply with the federal engine emission limitations including, for example, EPA Tier emission standards for non-road engines (40 CFR Part 1039), New Source Performance Standard emission limitations for stationary compression ignition engines (40 CFR 60, Subpart IIII), or National Emissions Standards for Hazardous Air Pollutant Sources for Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ). Therefore, the Department has determined that compliance with applicable federal standards and proper operation and maintenance of the engines constitutes BACT for these engines.

IV. Emission Inventory

Emission Source	Emissions Tons/Year [PTE] <sup>(b)</sup>						
	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	CO	NO <sub>x</sub>	SO <sub>2</sub>	VOC
Material Processing and Handling	3.19	1.49	0.67	--	--	--	--
Diesel Engine Generator Set [≤ 425 hp] <sup>(a)</sup>	2.81	2.81	0.50	8.52	39.53	2.61	3.21
Unpaved Roadways (Haul Roads)	4.20	1.16	0.12	--	--	--	--
<b>TOTAL EMISSIONS ►</b>	<b>10.19</b>	<b>5.45</b>	<b>1.28</b>	<b>8.52</b>	<b>39.53</b>	<b>2.61</b>	<b>3.21</b>
<p><sup>(a)</sup> Emission Inventory reflects enforceable limits on hours of operation and production output to keep allowable NO<sub>x</sub> emissions below the Title V threshold [100 tpy] and below the dispersion modeling threshold [40 tpy].</p> <p><sup>(b)</sup> PM emissions presented in the table represent the sum of the filterable and condensable particulate matter (CPM) fractions. All CPM is considered to be PM<sub>2.5</sub>.</p> <p>CO, carbon monoxide            lbs, pounds            MMBtu, million British Thermal Units            NO<sub>x</sub>, oxides of nitrogen            PM, particulate matter            PM<sub>10</sub>, particulate matter with an aerodynamic diameter of 10 microns or less            PM<sub>2.5</sub>, particulate matter with an aerodynamic diameter of 2.5 microns or less [Sum of condensable and filterable]            SO<sub>2</sub>, sulfur Dioxide            TPH, tons per hour            TPY, tons per year            VOC, volatile organic compounds            yds<sup>3</sup>, cubic yards</p>							

**Portable Wash Plant & Generator**

**Material Processing & Handling: Finesmaster 120 Portable Wash Plant**

Process Rate: 120 tons/hour  
 84.66 yd<sup>3</sup>/hr  
 Operating Hours: 8760 hours/year

**Sand Delivery to Wash Plant [3-05-011-22]**

PM Emissions (uncontrolled):

Emission Factor 0.0015 lbs/yd<sup>3</sup> processed [AP-42 Table 11.12-10, 6/06]  
 Calculations (0.0015 lbs/yd<sup>3</sup>) \* (84.66 yd<sup>3</sup>/hr) = 0.13 lbs/hr  
 (0.13 lbs/hr) \* (8760 hrs/yr) \* (0.0005 tons/lb) = 0.56 TPY

PM<sub>10</sub> Emissions (uncontrolled):

Emission Factor 0.00070 lbs/yd<sup>3</sup> processed [AP-42 Table 11.12-10, 6/06]  
 Calculations (0.0007 lbs/yd<sup>3</sup>) \* (84.66 yd<sup>3</sup>/hr) = 0.06 lbs/hr  
 (0.06 lbs/hr) \* (8760 hrs/yr) \* (0.0005 tons/lb) = 0.26 TPY

PM<sub>2.5</sub> Emissions (uncontrolled):

Emission Factor 0.00070 lbs/yd<sup>3</sup> processed [AP-42 Table 11.12-10, 6/06]  
 Calculations (0.0007 lbs/yd<sup>3</sup>) \* (84.66 yd<sup>3</sup>/hr) = 0.06 lbs/hr  
 (0.06 lbs/hr) \* (8760 hrs/yr) \* (0.0005 tons/lb) = 0.26 TPY

**Sand Transfer To Conveyor [3-05-011-24]**

PM Emissions (uncontrolled):

Emission Factor 0.0015 lbs/yd<sup>3</sup> processed [AP-42 Table 11.12-5, 6/06]  
 Calculations (0.0015 lbs/yd<sup>3</sup>) \* (84.66 yd<sup>3</sup>/hr) = 0.13 lbs/hr  
 (0.13 lbs/hr) \* (8760 hrs/yr) \* (0.0005 tons/lb) = 0.56 TPY

PM<sub>10</sub> Emissions (uncontrolled):

Emission Factor	0.00070 lbs/yd <sup>3</sup> processed	[AP-42 Table 11.12-5, 6/06]
Calculations	(0.0007 lbs/yd <sup>3</sup> ) * (84.66 yd <sup>3</sup> /hr) =	0.06 lbs/hr
	(0.06 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) =	0.26 TPY

PM<sub>2.5</sub> Emissions (uncontrolled):

Emission Factor	0.00070 lbs/yd <sup>3</sup> processed	[AP-42 Table 11.12-5, 6/06]
Calculations	(0.0007 lbs/yd <sup>3</sup> ) * (84.66 yd <sup>3</sup> /hr) =	0.06 lbs/hr
	(0.06 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) =	0.26 TPY

**Sand Conveyor Transfer Point [3-05-020-06]**

PM Emissions (uncontrolled):

Emission Factor	0.00014 lbs/ton processed	[AP-42 Table 11.19-2, 8/04]
Calculations	(0.00014 lbs/ton) * (120 tons/hr) =	0.02 lbs/hr
	(0.02 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) =	0.07 TPY

PM<sub>10</sub> Emissions (uncontrolled):

Emission Factor	0.000046 lbs/ton processed	[AP-42 Table 11.19-2, 8/04]
Calculations	(0.000046 lbs/ton) * (120 tons/hr) =	0.01 lbs/hr
	(0.01 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) =	0.02 TPY

PM<sub>2.5</sub> Emissions (uncontrolled):

Emission Factor	0.000013 lbs/ton processed	[AP-42 Table 11.19-2, 8/04]
Calculations	(0.000013 lbs/ton) * (120 tons/hr) =	0.00 lbs/hr
	(0.00 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) =	0.01 TPY

**Storage Pile Load-In & Load-Out**

Process Rate:	120 tons/hour
Operating Hours:	8760 hours/year
Pile Transfers:	2 [Initial Pile Formation → Pile Load-Out to Trucks]

Emission Factor	EF = k (0.0032) * [(U/5) <sup>1.3</sup> / (M / 2) <sup>1.4</sup> ]	[AP-42 13.2.4, 11/06]
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where: EF, Emission Factor = lbs Emitted / ton Processed

k, Dimensionless Particle Size Multiplier PM	=	0.74	[AP-42 13.2.4, 11/06]
k, Dimensionless Particle Size Multiplier PM <sub>10</sub>	=	0.35	[AP-42 13.2.4, 11/06]
k, Dimensionless Particle Size Multiplier PM <sub>2.5</sub>	=	0.053	[AP-42 13.2.4, 11/06]
U, Mean Wind Speed (mph)	=	9.3	[ASOS/AWOS AVE-MT 10 yr Ave.]
M, Material Moisture Content (%)	=	4.17	[AP-42 11.12-6, 06/06]

PM Emissions:

Emission Factor	EF = 0.74 * (0.0032) * [(9.33/5) <sup>1.3</sup> / (4.17/ 2) <sup>1.4</sup> ]	=	0.0019 lbs/ton
Calculations	(0.0019 lbs/ton) * (120 tons/hr) * (2 pile transfers) =		0.46 lbs/hr
	(0.46 lbs/hr) * (8760 hours/yr) * (0.0005 tons/lb) =		2.00 TPY

PM<sub>10</sub> Emissions:

Emission Factor	EF = 0.35 * (0.0032) * [(9.33/5) <sup>1.3</sup> / (4.17/ 2) <sup>1.4</sup> ]	=	0.0009 lbs/ton
Calculations	(0.0009 lbs/ton) * (120 tons/hr) * (2 piles) =		0.22 lbs/hr

$$(0.22 \text{ lbs/hr}) * (8760 \text{ hours/yr}) * (0.0005 \text{ tons/lb}) = 0.95 \text{ TPY}$$

**PM<sub>2.5</sub> Emissions:**

Emission Factor EF = 0.053 \* (0.0032) \* [ (9.33/5)<sup>1.3</sup> / (4.17/ 2)<sup>1.4</sup> ] = 0.00014 lbs/ton  
 Calculations (0.0001 lbs/ton) \* (120 tons/hr) \* (2 piles) = 0.03 lbs/hr  
 (0.03 lbs/hr) \* (8760 hours/yr) \* (0.0005 tons/lb) = 0.14 TPY

**Diesel Engine Generator**

Engine Rating: 425 hp  
 Fuel Input: 2.98 MMBtu/hr  
 21.7 gallons/hour [Estimated]  
 Hours of Operation: 6000 hours/year

**Particulate Emissions (uncontrolled):**

**PM Emissions:**

Emission Factor 0.0022 lb/hp-hr [AP-42 3.3-1, 10/96] 0.94 lbs/hr  
 Calculations (0.0022 lb/hp-hr) \* (425 hp) = 2.81 TPY  
 (0.94 lbs/hr) \* (6000 hrs/yr) \* (0.0005 tons/lb) =

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

Emission Factor 0.0022 lb/hp-hr [AP-42 3.3-1, 10/96] 0.94 lbs/hr  
 Calculations (0.0022 lb/hp-hr) \* (425 hp) = 2.81 TPY  
 (0.94 lbs/hr) \* (6000 hrs/yr) \* (0.0005 tons/lb) =

**PM<sub>2.5</sub> Emissions (filterable):**

Emission Factor 0.0479 lb/MMBtu [AP-42 3.4-2, 10/96] 0.14 lbs/hr  
 Calculations (0.0479 lb/MMBtu) \* (0.00 MMBtu/hr) = 0.43 TPY  
 (0.14 lbs/hr) \* (6000 hrs/yr) \* (0.0005 tons/lb) =

**PM<sub>2.5</sub> Emissions (condensable):**

Emission Factor 0.0077 lb/MMBtu [AP-42 3.4-2, 10/96] 0.02 lbs/hr  
 Calculations (0.0077 lb/MMBtu) \* (2.975 MMBtu/hr) = 0.07 TPY  
 (0.02 lbs/hr) \* (6000 hrs/yr) \* (0.0005 tons/lb) =

**CO Emissions:**

Emission Factor 0.00668 lb/hp-hr [AP-42 3.3-1, 10/96] 2.84 lbs/hr  
 Calculations (0.00668 lb/hp-hr) \* (425 hp) = 8.52 TPY  
 (2.84 lbs/hr) \* (6000 hrs/yr) \* (0.0005 tons/lb) =

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

Emission Factor 0.031 lb/hp-hr [AP-42 3.3-1, 10/96] 13.18 lbs/hr  
 Calculations (0.031 lb/hp-hr) \* (425 hp) = 39.53 TPY  
 (13.18 lbs/hr) \* (6000 hrs/yr) \* (0.0005 tons/lb) =

**SO<sub>2</sub> Emissions:**

Emission Factor 0.00205 lb/hp-hr [AP-42 3.3-1, 10/96] 0.87 lbs/hr  
 Calculations (0.0021 lb/hp-hr) \* (425 hp) = 2.61 TPY  
 (0.87 lbs/hr) \* (6000 hrs/yr) \* (0.0005 tons/lb) =

**VOC Emissions:**

Emission Factor      0.002514 lb/hp-hr                      [AP-42 3.3-1, 10/96]                      1.07 lbs/hr  
 Calculations      (0.0025 lb/hp-hr) \* (425 hp) =                      3.21 TPY  
                          (1.07 lbs/hr) \* (6000 hrs/yr) \* (0.0005 tons/lb) =

**Unpaved Roadways (Haul Roads)**

Miles Travelled:      5 Miles/Day [Estimate]  
 Vehicle Weight:      27.5 Tons [Mean Vehicle Weight Empty/Full]  
 Control Method: Water Application  
 Control Efficiency (C<sub>e</sub>): 50%

Emission Factor      EF = k(s/12)<sup>a</sup> \* (W/3)<sup>b</sup>                      [AP-42 13.2.2.2, 11/06]  
 where: EF, Emission Factor = lbs Emitted Per Vehicle Mile Traveled (VMT)  
                          k, Empirical Constant PM =                      4.9 [AP-42 Table 13.2.2-2, 11/06]  
                          k, Empirical Constant PM<sub>10</sub> =                      1.5 [AP-42 Table 13.2.2-2, 11/06]  
                          k, Empirical Constant PM<sub>2.5</sub> =                      0.15 [AP-42 Table 13.2.2-2, 11/06]  
                          s, Surface Material Silt Content (%) =                      7.1 [AP-42 Table 13.2.2-1, 11/06]  
                          W, Mean Vehicle Weight (tons) =                      27.5 [Applicant Provided Data]  
                          a, Empirical Constant PM =                      0.7 [AP-42 Table 13.2.2-2, 11/06]  
                          a, Empirical Constant PM<sub>10</sub>/PM<sub>2.5</sub> =                      0.9 [AP-42 Table 13.2.2-2, 11/06]  
                          b, Empirical Constant PM - PM<sub>2.5</sub> =                      0.45 [AP-42 Table 13.2.2-2, 11/06]

**PM Emissions:**

Emission Factor      EF = 4.9 \* (7.1/12)<sup>0.7</sup> \* (27.5/3)<sup>0.45</sup> =                      9.20 lbs/VMT  
 Calculations      (9.20 lbs/VMT) \* (5 miles/day) \* (1 - 0.5 C<sub>e</sub>) =                      22.99 lbs/day  
                          (22.99 lbs/day) \* (365 days/yr) \* (0.0005 tons/lb) =                      4.20 TPY

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

Emission Factor      EF = 1.5 \* (7.1/12)<sup>0.9</sup> \* (27.5/3)<sup>0.45</sup> =                      2.53 lbs/VMT  
 Calculations      (2.53 lbs/VMT) \* (5 miles/day) \* (1 - 0.5 C<sub>e</sub>) =                      6.34 lbs/day  
                          (6.34 lbs/day) \* (365 days/yr) \* (0.0005 tons/lb) =                      1.16 TPY

**PM<sub>2.5</sub> Emissions:**

Emission Factor      EF = 0.15 \* (7.1/12)<sup>0.9</sup> \* (27.5/3)<sup>0.45</sup> =                      0.25 lbs/VMT  
 Calculations      (0.25 lbs/VMT) \* (5 miles/day) \* (1 - 0.5 C<sub>e</sub>) =                      0.63 lbs/day  
                          (0.63 lbs/day) \* (365 days/yr) \* (0.0005 tons/lb) =                      0.12 TPY

**V. Existing Air Quality**

The initial location of this portable source is to be located in the SW ¼ of the SE ¼ of Section 22, Township 35 North, Range 3 West, in Toole County, Montana. The initial location and those areas for which this facility is permitted to operate under MAQP #4686-00 has been designated unclassified/attainment with all ambient air quality standards and there are no major air pollution sources in the surrounding area.

VI. Air Quality Impacts

MAQP #4686-00 will cover the plant while operating at any location within Montana, excluding 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 PM<sub>10</sub> nonattainment areas.

Emissions generated from the operation of this source are to be well control and limited, furthermore, the portable unit would be expected to be operated on an intermittent and seasonal basis and any air quality impacts would be expected to be minimal and temporary. The Department determined that the impact from this permitting action will be minor and is not expected to cause or contribute to a violation of any ambient air quality standard.

VII. Ambient Air Impact Analysis

The Department determined that the impact from this permitting action will be minor. The Department believes it will not cause or contribute to a violation on any ambient air quality standard.

VIII. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, the Department conducted the following private property taking and damaging assessment.

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	X	7a. Is the impact of government action direct, peculiar, and significant?
	X	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	X	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	X	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

Based on this analysis, the Department determined there are no taking or damaging implications associated with this permit action.

IX. Environmental Assessment

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

Analysis prepared by: D. Kuenzli  
Date: October 20, 2011

**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:* Bay Materials, LLC  
P.O. Box 1077  
Shelby, MT 59474

*Montana Air Quality Permit Number (MAQP):* 4686-00

*Preliminary Determination Issued:* November 1, 2011

*Department Decision Issued:* November 18, 2011

*Permit Final:* December 6, 2011

1. *Legal Description of Site:* Bay proposes to operate a portable non-metallic mineral crushing, screening and wash plant, which will initially be located in the SW ¼ of the SE ¼ of Section 22, Township 35 North, Range 3 West, in Toole County, Montana. However, MAQP #4686-00 applies while operating at any location in Montana, except those areas having a Department-approved permitting program, areas considered tribal lands, or areas in or within 10 kilometers (km) of certain PM<sub>10</sub> nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* An addendum would be required for locations in or within 10 km of certain PM<sub>10</sub> nonattainment areas.
2. *Description of Project:* The Department received a permit application from Bay for the operation of a portable crushing facility with a combined maximum rated design process rate of 900 tons per hour (TPH) of crushing capacity and 1,000 TPH of screening capacity. The majority of the proposed mineral processing equipment utilized by Bay will be self-propelled track mounted units which do not require auxiliary power. A single diesel-fired engine generator set is proposed in order to provide supplemental power to the project site and to the power a portable wash plant.
3. *Objectives of Project:* The object of the project would be to produce business and revenue for the company through the sale and use of aggregate. The issuance of MAQP #4686-00 would allow Bay to operate the permitted equipment at various locations throughout Montana (as described above), including the proposed initial site location.
4. *Alternatives Considered:* In addition to the proposed action, the Department considered the "no-action" alternative. The "no-action" alternative would deny issuance of the MAQP to the proposed facility. However, the Department does not consider the "no-action" alternative to be appropriate because Bay 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 listing of the enforceable permit conditions and a permit analysis, including a BACT analysis, would be contained in MAQP #4686-00.
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 the permit conditions would be reasonably necessary to ensure compliance with applicable requirements and to demonstrate compliance with those requirements and would 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

This permitting action would be expected to have a minor effect on terrestrial and aquatic life and habitats, as the proposed project would affect an existing, industrial property that has already been disturbed. Furthermore, the air emissions would likely have only minor effects on terrestrial and aquatic life because facility emissions would be well dispersed in the area of the operations (see Section 7.F of this EA) and would have intermittent and seasonal 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 would be required for dust suppression on the surrounding roadways and general facility area and to supply the portable wash plant. This water use would be expected to only cause minor, if any, impacts to water resources because the facility is small and only a small volume of water would be required to be used. In addition, the facility would emit air pollutants, and corresponding deposition of pollutants would occur, as described in Section 7.F. of this EA. The site is in an existing open-cut pit where water runoff would be more readily controlled. However, the Department determined that, due to dispersion characteristics of pollutants and conditions that would be placed in MAQP #4686-00, any impacts from deposition of pollutants on water quality, quantity, and distribution expected would be minor.

C. Geology and Soil Quality, Stability, and Moisture

Only minor impacts from deposition of air pollutants on soils would likely result (as described in Section 7.F of this EA) and only minor amounts of water would be used for pollution control, and only as necessary, in controlling particulate emissions. Thus, only minimal water runoff would likely occur. Since only minor amounts of pollution would be expected and corresponding emissions would be widely dispersed before settling upon

surrounding soils and vegetation (as described in Section 7.D of this EA), impacts would be minor. Therefore, any effects upon geology and soil quality, stability, and moisture from air pollutant emissions from equipment operations would likely be minor and short-lived.

D. Vegetation Cover, Quantity, and Quality

Only minor impacts would be expected to occur on vegetative cover, quality, and quantity because the facility would operate in an area where vegetation has been previously disturbed. During operations, the facility would likely be a relatively minor source of emissions and the pollutants widely dispersed (as described in Section 7.F of this EA); therefore, deposition on vegetation from the proposed project would expect to be minor. Also, due to limited water usage (as described in Section 7.B of this EA) and minimal associated soil disturbance from the application of water and water runoff (as described in Section 7.C of this EA), corresponding vegetative impacts would likely be minor.

E. Aesthetics

The crushing facility would be visible and would create noise while operating at the proposed site. However, MAQP #4686-00 would include conditions to control emissions, including visible emissions, from the plant. The facility would be portable, would operate on an intermittent and seasonal basis, and would be a small industrial source. Therefore, any visual aesthetic impacts would be short-lived and are expected to be minor.

F. Air Quality

Air quality impacts from the proposed project would likely be minor because the facility would be relatively small and operate on an intermittent and temporary basis. MAQP #4686-00 includes conditions limiting the facility's opacity; require water and water spray bars be available on site and used to ensure compliance with opacity standards; and limit the facility's crushing production.

Further, the Department determined that this crushing facility would be a minor source of emissions as defined under the Title V Operating Permit Program because the source's potential to emit is limited to below the major source threshold level of 100 TPY for any regulated pollutant. Pollutant deposition from the facility would expect to be minimal because the pollutants emitted are widely dispersed (from factors such as wind speed and wind direction) and exhibit minimal deposition on the surrounding area. Therefore, air quality impacts from operating the crushing facility in this area would be expected to be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The Department, in an effort to assess any potential impacts to any unique endangered, fragile, or limited environmental resources in the initial proposed area of operation (SW ¼ of the SE ¼ of Section 22, Township 35 North, Range 3 West, in Toole County, Montana), contacted the Natural Resource Information System – Montana Natural Heritage Program. Search results concluded there are two species of concern within the area. The search area, in this case, is defined by the section, township, and range of the proposed site, with an additional one (1) mile buffer. The known species of concern include the vertebrate animals: the Ferruginous Hawk (Sensitive) and the Golden Eagle (Sensitive).

While these species may be found within the search area, these animals may have many miles of potential habitat. Specific effects of operating the crushing facility in this area would be minor since the facility is relatively small in size and located within an existing construction

area. In addition the source will have only seasonal and intermittent operations in the area. Therefore, the Department determined that any effects upon these species would likely be minor and short-lived.

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

Due to the relatively small size of the project, only small demands on environmental resources would likely be required for proper operation. Only small quantities of water are required for dust suppression of particulate emissions being generated at the site. In addition, impacts to air resources would be expected to be minor because the source would be considered a minor industrial source of emissions, with intermittent and seasonal operations, and because air pollutants generated by the facility would be widely dispersed as described in Section 7.F of this EA. Energy requirements would also be small, as the diesel engines would use small amounts of fuel. Overall, any impacts to water, air, and energy resources would likely be minor.

#### I. Historical and Archaeological Sites

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

Based on information received from the applicant, the proposed project sites have been previously disturbed in accordance with current mining permits held by the applicant.

#### J. Cumulative and Secondary Impacts

The operation of the crushing facility would likely cause minor cumulative and secondary impacts to the physical and biological aspects of the human environment because the facility would be limited in the amount of emissions allowed to be released to the atmosphere. Emissions and noise generated from the equipment would likely result in only minor impacts to the area of operations because the operation of the crushing facility would be seasonal and temporary. The proposed project would be short-term in nature, and likely have minor cumulative effects upon resources within the area. These resources include water, terrestrial and aquatic life, soils, and vegetation. Overall, cumulative and secondary impacts to the physical and biological aspects of the human environment would likely 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 operation of the crushing facility would expect to cause no 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 that would be placed in MAQP #4686-00, which would limit the effects to social structures and mores.

**B. Cultural Uniqueness and Diversity**

The cultural uniqueness and diversity of this area would not likely be impacted by the operation of the proposed crushing facility because the facility is a portable source, with seasonal and intermittent operations. Therefore, there would not be any impacts expected to the cultural uniqueness and diversity of this

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

The operation of the crushing facility would likely have little, if any, impact on the local and state tax base and tax revenue because the facility would be a minor industrial source of emissions and would have seasonal and intermittent operations. The facility would require the use of only 4 employees. Thus, only minor impacts to the local and state tax base and revenue would be expected from the employees and facility production. Furthermore, the impacts to local tax base and revenue would be minor because the source would be portable and the money generated for taxes would be widespread.

**D. Agricultural or Industrial Production**

The operation of the crushing facility would have only a minor impact on local industrial production since the facility would be a minor source of air emissions. Because minimal deposition of air pollutants would occur on the surrounding land (as described in Section 7.F

of this EA), only minor and temporary effects on the surrounding vegetation (i.e. 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, as described in Section 7.D of this EA.

E. Human Health

MAQP #4686-00 would incorporate conditions to ensure that the crushing/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. 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 operational limits that would be required by MAQP #4686-00. Also, the facility would be operating on a temporary basis and pollutants would disperse from the ventilation of emissions at this site (see Section 7.F of this EA). Therefore, only minor impacts would be expected on human health from the proposed project.

F. Access to and Quality of Recreational and Wilderness Activities

Based on information received from Bay, no recreational activities or wilderness areas are near the proposed project site. Therefore, no impacts to the access to and quality of recreational and wilderness activities are anticipated.

G. Quantity and Distribution of Employment

The portable crushing/screening operation would only require 4 employees to operate and would have seasonal and intermittent operations. No individuals would be expected to permanently relocate to this area of operation as a result of operating the crushing/screening facility. Therefore, no effects upon the quantity and distribution of employment in this area would be expected.

H. Distribution of Population

The portable crushing/screening operation is a portable industrial facility that would only require 4 employees to operate. No individuals would be expected to permanently relocate to this area of operation as a result of operating the crushing/screening facility. Therefore, the crushing/screening facility would not likely impact the normal population distribution in the initial area of operation or any future operating site.

I. Demands of Government Services

Minor increases may be seen in traffic on existing roadways in the area while the crushing/screening facility is being operated. In addition, government services would be required for acquiring the appropriate permits for the proposed project and to verify compliance with the permits that would be issued. However, demands for government services would expect to be minor.

J. Industrial and Commercial Activity

The operation of the crushing facility would represent only a minor increase in the industrial activity in the proposed area of operation because the source would be a relatively small industrial source that 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

Bay would be allowed, by MAQP #4686-00, to operate in areas designated by Environmental Protection Agency as attainment or unclassified for ambient air quality. MAQP #4686-00 contains operational restrictions for protecting air quality and to keep facility emissions in compliance with any applicable ambient air quality standards, as a locally adopted environmental plan or goal for operating at this proposed site. Because the proposed crushing/screening facility would be a portable source and would likely have intermittent and seasonal operations, any impacts from the project would be expected to be minor and short-lived.

L. Cumulative and Secondary Impacts

The operation of the facility would cause only 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 be a portable and temporary source. Minor increases in traffic would have minor effects on local traffic in the immediate area. Because the source is relatively small and temporary, only minor economic impacts to the local economy would be expected from operating the facility. Further, this facility may be operated in conjunction with other equipment owned and operated by Bay, but any cumulative impacts upon the social and economic aspects of the human environment would likely be minor and short-lived. Thus, only minor and temporary cumulative effects would be expected 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 operation of a portable non-metallic mineral processing facility, MAQP #4686-00 provides conditions and limitations to ensure the facility would 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

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