



Montana Department of  
**ENVIRONMENTAL QUALITY**

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May 1, 2012

Nathan Hexom  
Hexco, LLC  
2880 Technology Blvd. W. #2  
Bozeman, MT 59718

Dear Mr. Hexom:

Montana Air Quality Permit #4726-00 is deemed final as of May 1, 2012, by the Department of Environmental Quality (Department). This permit is for a portable crushing/screening operation. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,

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

Deanne Fischer, P.E.  
Environmental Engineer  
Air Resources Management Bureau  
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VW:DF  
Enclosure

Montana Department of Environmental Quality  
Permitting and Compliance Division

Montana Air Quality Permit #4726-00

Hexco, LLC  
2880 Technology Blvd. W. #2  
Bozeman, MT 59718

May 1, 2012



## MONTANA AIR QUALITY PERMIT

Issued To: Hexco, LLC  
2880 Technology Blvd. W. #2  
Bozeman, MT 59718

MAQP: # 4726-00  
Application Complete: 03/16/2012  
Preliminary Determination Issued: 03/28/2012  
Department's Decision Issued: 04/13/2012  
Permit Final: 05/01/2012  
AFS #: 777-4726

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

Hexco proposes to operate a portable crushing/screening operation. Hexco's operation generally includes 2 crushing/screening plants, (Plant 1 and Plant 2), a diesel engine/generator and associated equipment. However, a complete list of permitted equipment is contained in Section I.A of the permit analysis.

#### B. Plant Location

Hexco will operate a portable crushing/screening operation, which will initially be located at Section 4, Township 26N, Range 56 E, Richland County, Montana. However, MAQP #4726-00 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 (PM<sub>10</sub>) nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* An addendum will be required for locations in or within 10 km of certain PM<sub>10</sub> nonattainment areas.

### SECTION II: Conditions and Limitations

#### A. Emission Limitations

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

- For equipment that commence construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008: 10% opacity
3. All visible emissions from any non-NSPS affected equipment shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).
  4. Water and spray bars shall be available on-site at all times and operated as necessary to maintain compliance with the opacity limitations in Sections II.A.1, II.A.2, and II.A.3 (ARM 17.8.749 and ARM 17.8.752).
  5. Hexco shall not cause or authorize the use of any street, road or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).
  6. Hexco 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. Hexco shall not operate more than three crushers at any given time and the total combined maximum rated design capacity of the crushers shall not exceed 1,440 tons per hour (TPH) (ARM 17.8.749).
  8. Hexco shall not operate more than two screens at any given time and the total combined maximum rated design capacity of the screens shall not exceed 940 TPH (ARM 17.8.749).
  9. Hexco shall incorporate shrouds on the crusher and conveyor feed boxes and the crushers will be choke fed to limit air entrainment and dust emission (ARM 17.8.752).
  10. Hexco shall not operate or have on site more than one diesel engine/generator. The maximum capacity of the diesel engine that drives the generator shall not exceed 923 brake horsepower (bhp) (ARM 17.8.749).
  11. The diesel engine/generator with a maximum rated capacity of up to 923 hp shall be compliant with Environmental Protection Agency's (EPA) non-road compression-ignition engine, Tier 2 (at minimum) emission standards (ARM 17.8.749).
  12. Operation of the diesel engine/generator shall not exceed 5,500 hours during any rolling 12-month time period (ARM 17.8.749).
  13. Hexco shall not operate more than one diesel engine driving the equipment in Plant 1. The maximum capacity of the diesel engine that drives Plant 1 shall not exceed 451 bhp (ARM 17.8.749).
  14. The diesel engine with a maximum rated capacity of up to 451 bhp shall be compliant with EPA non-road compression-ignition engine Tier 3 (at minimum) emission standards (ARM 17.8.749).
  15. Operation of the diesel engine driving Plant 1 shall not exceed 5,500 hours during any rolling 12-month time period (ARM 17.8.749).

16. Hexco shall not operate more than one diesel engine driving the crushing/screening plant equipment in Plant 2. The maximum capacity of the diesel engine that drives Plant 2 shall not exceed 275 bhp (ARM 17.8.749).
17. The diesel engine with a maximum rated capacity of up to 275 bhp shall be compliant with EPA non-road compression-ignition engine Tier 3 (at minimum) emission standards (ARM 17.8.749).
18. Operation of the diesel engine driving Plant 2 shall not exceed 5,500 hours during any rolling 12-month time period (ARM 17.8.749).
19. If the permitted equipment is used in conjunction with any other equipment owned or operated by Hexco, 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).
20. Hexco shall comply with all applicable standards and limitations, monitoring, reporting, recordkeeping, testing, and notification requirements contained in 40 CFR 60, Subpart OOO, *Standards of Performance for Nonmetallic Mineral Processing Plants* (ARM 17.8.340 and 40 CFR 60, Subpart OOO).
21. Hexco shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* and 40 CFR 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, for any applicable diesel engine (ARM 17.8.340; 40 CFR 60, Subpart IIII; ARM 17.8.342 and 40 CFR 63, Subpart ZZZZ).

B. Testing Requirements

1. Within 60 days after achieving maximum production, but no later than 180 days after initial start-up, an EPA Method 9 opacity test and/or other methods and procedures as specified in 40 CFR Part 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. Additional testing may be required by 40 CFR 60, Subpart OOO (ARM 17.8.340 and 40 CFR 60, Subpart OOO).
2. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
3. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. If this 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. Hexco 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. Hexco 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. Hexco shall document, by month, the hours of operation of the diesel engine/generator and two diesel engines. By the 25<sup>th</sup> day of each month, Hexco shall calculate the hours of operation for each diesel engine for the previous month. The monthly information will be used to demonstrate compliance with the rolling 12-month limitation in Sections II.A.12, II.A.15 and II.A.18. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

D. Notification

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

SECTION III: General Conditions

- A. Inspection – Hexco 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) or 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 Hexco fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Hexco 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), Montana Code Annotated (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 Hexco 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. Hexco 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  
Hexco, LLC  
MAQP #4726-00

I. Introduction/Process Description

Hexco, LLC (Hexco) owns and operates a portable crushing/screening facility.

A. Permitted Equipment

Equipment used at the facility includes the following:

Plant 1:

- 2011 Caterpillar Prime diesel engine/generator (maximum capacity of 923 brake horsepower (bhp)),
- 2010 Pioneer jaw crusher (maximum capacity 500 tons per hour (TPH)),
- 2009 Metso Diesel Closed Circuit Cone Plant (including a cone crusher and a 6x20 screen with a maximum capacity 500 TPH each, driven by a 451 bhp diesel engine),
- Three conveyors (combined maximum capacity 1,500 TPH), and,
- Associated equipment.

Plant 2:

- 2009 Metso Lokotrack jaw crushing plant (including a jaw crusher and screen with a maximum capacity of 440 TPH each, driven by a 275 bhp diesel engine), and
- Associated equipment.

Although the above list specifies the equipment installed at the facility at the time of the current permit action, MAQP #4726-00 was written in a de minimis friendly manner to allow operational flexibility so that alternate applicable equipment may be utilized provided the maximum capacities listed in Section II of the MAQP are not exceeded.

B. Source Description

The Hexco facility consists of two crushing/screening plants (Plant 1 and Plant 2). For a typical operational set-up of Plant 1, material will be loaded into the jaw crusher from either a loader or haul truck. The material will move from the crusher to a screen with some material going to stockpile and the remaining material passing through to a cone plant and then stockpiled. For a typical operational set-up of Plant 2, material will be loaded into the jaw crusher from either a loader or haul truck. Once crushed, the material will then be 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 locations of complete copies of all applicable rules and regulations 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).

Hexco 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 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM<sub>10</sub>
11. ARM 17.8.230 Fluoride in Forage

Hexco 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, Hexco 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 Processes. 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 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). Hexco is considered an NSPS-affected facility under 40 CFR Part 60 and is subject to the requirements of the following subparts.
  - a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to an NSPS Subpart as listed below:
  - b. 40 CFR 60, Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants. In order for a crushing plant to be subject to this subpart, the facility must meet the definition of an affected facility and, the affected equipment must have been constructed, reconstructed, or modified after August 31, 1983. Based on the information submitted by Hexco, the portable crushing equipment to be used under MAQP #4726-00 is subject to this subpart because it meets the definition of an affected facility and was constructed or modified after August 31, 1983.
  - c. 40 CFR 60, Subpart III - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE). Owners and operators of stationary compression ignition internal combustion engines (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. An ICE is considered stationary if it remains or will remain at the permitted location for more than 12 months, or a shorter period of time for an engine located at a seasonal source. A seasonal source remains at a single location on a permanent basis (at least 2 years) and operates 3 months or more each year.

Based on the information submitted by Hexco, the CI ICE equipment to be used under MAQP #4726-00 may be subject to this subpart because they were manufactured after April 1, 2006, and may remain at the same location for more than 12 consecutive months.

7. 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. The following subparts could potentially become applicable to the facility during the life of the permit: Hexco is considered a NESHAP-affected facility under 40 CFR Part 63 and is subject to the requirements of the following subparts:

- a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to a NESHAPs Subpart as listed below.
- b. 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants (HAPs) for Stationary Reciprocating Internal Combustion Engines (RICE). An owner or operator of a stationary reciprocating internal combustion engine (RICE) at a major or area source of HAP emissions is subject to this rule except if the stationary RICE is being tested at a stationary RICE test cell/stand. An area source of HAP emissions is a source that is not a major source. A RICE is considered stationary if it remains or will remain at the permitted location for more than 12 months, or a shorter period of time for an engine located at a seasonal source. A seasonal source remains at a single location on a permanent basis (at least 2 years) and operates 3 months or more each year. Based on the information submitted by Hexco, the RICE equipment to be used under MAQP #4726-00 may be subject to this subpart because they operate at an area source of HAP emissions and the engines may remain at the same location for more than 12 consecutive months.

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. Hexco submitted the appropriate permit application fee for the current permit action.
2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department.

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

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

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit modification to construct, modify, or use any asphalt plant, crusher or screen that has the potential to emit (PTE) greater than 15 tons per year of any pollutant. Hexco has a PTE greater than 15 tons per year of particulate matter (PM), particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>), oxides of nitrogen (NO<sub>x</sub>), and carbon monoxide (CO) 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. Hexco 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. Hexco submitted an affidavit of publication of public notice for the February 29, 2012, issue of the *Sidney Herald*, a newspaper of general circulation in the Town of Sidney in Richland 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 Hexco 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 Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

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

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

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any stationary source having:
  - a. PTE > 100 tons/year of any pollutant;

- b. PTE > 10 tons/year of any one 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 PM<sub>10</sub> in a serious PM<sub>10</sub> nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (1) Title V of the FCAA Amendments of 1990 requires that all sources, as defined in ARM 17.8.1204 (1), obtain a Title V Operating Permit. In reviewing and issuing MAQP #4726-00 for Hexco, 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 PM<sub>10</sub> nonattainment area.
  - d. This facility is subject to current NSPS (40 CFR 60, Subparts A, OOO and potentially IIII).
  - e. This facility is potentially subject to a current NESHAP standard (40 CFR 63, 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 Hexco 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, Hexco will be required to obtain a Title V Operating Permit.

### III. BACT Determination

A BACT determination is required for each new or modified source. Hexco shall install on the new or modified source the maximum air pollution control capability which is technologically practicable and economically feasible, except that BACT shall be utilized.

#### Crushing/Screening Particulate 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 operation. These two control methods are water and/or chemical dust suppressant. Chemical dust suppressant could be used for dust suppression on the area surrounding the crushing operation and for emissions from the crushing 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. Individual circumstances may, however, necessitate the use of chemical dust suppressant to assist in controlling particulate emissions from the surrounding plant area.

The Hexco plant will also incorporate shrouds on the feed boxes which are choke fed to limit air entrainment and dust emission.

In order to maintain compliance with the opacity requirements and reasonable precaution limitations, the Department determined that application of water and/or dust suppressant chemicals using spray bars and shrouds on the feed boxes constitutes BACT for the crushing/screening operation.

#### Diesel Engines

Due to the limited amount of emissions produced by the diesel engines and the lack of readily available cost effective add-on controls, add-on controls would be cost prohibitive. Generally, any new diesel engines 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 constitutes BACT for these engines. 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.

#### IV. Emission Inventory

Emission Source	tons/year						
	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	CO	VOC	SO <sub>2</sub>
Engine/Generator (up to 923 bhp)(Tier 2)	0.83	0.83	0.83	26.70	14.60	6.38	5.20
Metso HP200 Closed Circuit Plant - Engine (up to 451 bhp) (Tier 3)	0.41	0.41	0.41	8.15	7.13	3.12	2.54
2010 Pioneer Jaw crusher(500 TPH)	1.65	0.74	0.14				
2009 Metso HP 200 Crusher (500 TPH)	1.65	0.74	0.14				
2009 Metso 6x20 Screen (500 TPH)	3.03	1.02	0.07				
2009 Metso Lokotrack Crusher - Engine (up to 275 bhp) (Tier 3)	0.25	0.25	0.25	4.97	4.35	1.90	1.55
2009 Metso Lokotrack Crusher (440 TPH)	1.45	0.65	0.12				
Metso Lokotrack plant - screen (440 TPH)	2.66	0.90	0.06				
Haul Roads	7.14	1.97	0.20				
Conveyor Transfer Points (6 transfers)	1.16	0.38	0.11				
Pile Forming	6.99	3.30	0.50				
Bulk Loading	0.02	0.02	0.02				
<b>Total Emissions</b>	<b>27.23</b>	<b>11.21</b>	<b>2.84</b>	<b>39.81</b>	<b>26.08</b>	<b>11.40</b>	<b>9.30</b>
Assuming	5,500 hr/yr operation						

Footnotes: Annual hours of operation are limited to 5,500 hours per year to keep total NO<sub>x</sub> emissions below the modeling threshold of 40 TPY

- \*\* CO = carbon monoxide  
HAPs = hazardous air pollutants  
bhp = brake horsepower  
lb = pound  
N/A = not applicable  
ND = no data available  
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

SO<sub>x</sub> = oxides of sulfur  
 TPH = tons per hour  
 TPY = tons per year  
 VOC = volatile organic compounds  
 yr = year

**923 bhp Caterpillar Prime Engine Generator (EPA Tier 2)**

Operational Capacity of Engine = 923 hp **923 hp**  
 Engine = 688 kW **688 kW**  
 Hours of Operation = 5,500 hours/yr **5,500 hours/yr**

**PM Emissions:**

(Tier 2, 40 CFR 89 Subpart B, Table 1) Emission Factor = 2.00E-01 g/kw-hr  
 Calculation: (1,668.44 lbs/yr) \* (ton/2000 lb) = **0.83** ton/yr  
 Calculation: (688 kw) \* (5,500 hours/yr) \* (0.200 g/kw-hr) \* 0.0022046 lb/g = 1,668.44 lbs/yr

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

(Tier 2, 40 CFR 89 Subpart B, Table 1) Emission Factor = 2.00E-01 g/kw-hr  
 Calculation: (1,668.44 lbs/yr) \* (ton/2000 lb) = **0.83** ton/yr  
 Calculation: (688 kw) \* (5,500 hours/yr) \* (0.200 g/kw-hr) \* 0.0022046 lb/g = 1,668.44 lbs/yr

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

(Tier 2, 40 CFR 89 Subpart B, Table 1) Emission Factor = 2.00E-01 g/kw-hr  
 Calculation: (1,668.44 lbs/yr) \* (ton/2000 lb) = **0.83** ton/yr  
 Calculation: (688 kw) \* (5,500 hours/yr) \* (0.200 g/kw-hr) \* 0.0022046 lb/g = 1,668.44 lbs/yr

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

(Tier 2, 40 CFR 89 Subpart B, Table 1) Emission Factor = 6.40 g/kw-hr  
 Calculation: (814.82 lbs/yr) \* (ton/2000 lb) = **26.70** ton/yr  
 Calculation: (688 kw) \* (5,500 hours/yr) \* (6.40 g/kw-hr) \* 0.0022406 lb/g = 53,390.12 lbs/yr

**CO Emissions:**

(Tier 2, 40 CFR 89 Subpart B, Table 1) Emission Factor = 3.50E+00 g/kw-hr  
 Calculation: (814.82 lbs/yr) \* (ton/2000 lb) = **14.60** ton/yr  
 Calculation: (688 kw) \* (5,500 hours/yr) \* (3.50 g/kw-hr) \* 0.0022406 lb/g = 29,197.72 lbs/yr

**VOC Emissions:**

(AP-42, Sec. 3.3, Table 3.3-1, TOC, Exhaust + Crankcase, 10/96) Emission Factor = 2.51E-03 lbs/hp-hr  
 Calculation: (923 hp) \* (5,500 hours/yr) \* (0.00251 lbs/hp-hr) \* (ton/2000 lb) = **6.38** ton/yr  
 Calculation: (923 hp) \* (5,500 hours/yr) \* (0.00251 lbs/hp-hr) = **12,762.83** lbs/yr

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

(AP-42, Sec. 3.3, Table 3.3-1, 10/96) Emission Factor = 2.05E-03 lbs/hp-hr  
 Calculation: (923 hp) \* (5,500 hours/yr) \* (0.00205 lbs/hp-hr) \* (ton/2000 lb) = **5.20** ton/yr  
 Calculation: (923 hp) \* (5,500 hours/yr) \* (0.00205 lbs/hp-hr) = **10,406.83** lbs/yr

**Metso HP200 Closed Circuit Plant engine (451 bhp) (Tier 3)**

Operational Capacity of Engine = 451 hp **451 hp**  
 Engine = 336 kW **336 kW**  
 Hours of Operation = 5,500 hours/yr **5,500 hours/yr**

**PM Emissions:**

(Tier 3,40 CFR 89 Subpart B, Table 1) Emission Factor =	2.00E-01	g/kw-hr
Calculation: (814.82 lbs/yr) * (ton/2000 lb) =	<b>0.41</b>	ton/yr
Calculation: (336 kW) * (5,500 hours/yr) * (336.00 kW)* 0.0022046 lb/g =	<b>814.82</b>	lbs/yr

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

(Tier 3,40 CFR 89 Subpart B, Table 1) Emission Factor =	2.00E-01	g/kw-hr
Calculation: (814.82 lbs/yr) * (ton/2000 lb) =	<b>0.41</b>	ton/yr
Calculation: (336 kW) * (5,500 hours/yr) * (0.41 ton/yr)* 0.0022046 lb/g =	<b>814.82</b>	lbs/yr

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

(Tier 3,40 CFR 89 Subpart B, Table 1) Emission Factor =	2.00E-01	g/kw-hr
Calculation: (814.82 lbs/yr) * (ton/2000 lb) =	<b>0.41</b>	ton/yr
Calculation: (336 kW) * (5,500 hours/yr) * (0.41 ton/yr)* 0.0022046 lb/g =	<b>814.82</b>	lbs/yr

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

(Tier 3,40 CFR 89 Subpart B, Table 1) Emission Factor =	4.00	g/kw-hr
Calculation: (814.82 lbs/yr) * (ton/2000 lb) =	<b>8.15</b>	ton/yr
Calculation: (336 kW) * (5,500 hours/yr) * (4.00 g/kw-hr) * 0.0022406 lb/g =	<b>16,296.40</b>	lbs/yr

**CO Emissions:**

(Tier 3,40 CFR 89 Subpart B, Table 1) Emission Factor =	3.50E+00	g/kw-hr
Calculation: (814.82 lbs/yr) * (ton/2000 lb) =	<b>7.13</b>	ton/yr
Calculation: (336 kW) * (5,500 hours/yr) * (3.50 g/kw-hr) =	<b>14,259.35</b>	lbs/yr

**VOC Emissions:**

(AP-42, Table 3.3-1, TOC, Exhaust + Crankcase, 10/96) Emission Factor =	2.51E-03	lbs/hp-hr
Calculation: (814.82 lbs/yr) * (ton/2000 lb) =	<b>3.12</b>	ton/yr
Calculation: (451 hp) * (5,500 hours/yr) * (0.0025 lbs/hp-hr) =	<b>6,236.23</b>	lbs/yr

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

(AP-42, Sec. 3.3, Table 3.3-1, 10/96) Emission Factor =	2.05E-03	lbs/hp-hr
Calculation: (814.82 lbs/yr) * (ton/2000 lb) =	<b>2.54</b>	ton/yr
Calculation: (451 hp) * (5,500 hours/yr) * (0.0021 lbs/hp-hr) =	<b>5,085.03</b>	lbs/yr

**2010 Pioneer Jaw crusher (500 TPH)**

Process Rate	500	ton/hr
PM Emissions: (AP 42, Table 11.19.2-2, 8/04, controlled)		
Emission Factor	0.0012	lb/ton
Calculation: (500 ton/hr) * (5,500 hrs/yr) * (0.0012 lb/ton) * (ton/2000 lb) =	<b>1.65</b>	ton/yr

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

Emission Factor: (AP 42, Table 11.19.2-2, 8/04, controlled)	0.00054	lb/ton
Calculation: (500 ton/hr) * (5,500 hrs/yr) * (0.00054 lb/ton) * (ton/2000 lb) =	<b>0.74</b>	ton/yr
Daily Calculation: (500 ton/hr) * (0.00054 lb/ton) * (24 hr/day) =	<b>6.48</b>	lb/day

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

Emission Factor: (AP 42, Table 11.19.2-2, 8/04, controlled)	0.0001	lb/ton
Calculation: (500 ton/hr) * (5,500 hrs/yr) * (0.0001 lb/ton) * (ton/2000 lb) =	<b>0.14</b>	ton/yr

**2009 Metso HP 200 Crusher (500 TPH)**

Process Rate	500	ton/hr
PM Emissions:		
Emission Factor: (AP 42, Table 11.19.2-2, 8/04, controlled)	0.0012	lb/ton
Calculation: (500 ton/hr) * (5,500 hrs/yr) * (0.0012 lb/ton) * (ton/2000 lb) =	<b>1.65</b>	ton/yr

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

Emission Factor:(AP 42, Table 11.19.2-2, 8/04, controlled)	0.00054	lb/ton
Calculation: (500 ton/hr) * (5,500 hrs/yr) * (0.00054 lb/ton) * (ton/2000 lb) =	<b>0.74</b>	ton/yr

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

Emission Factor: (AP 42, Table 11.19.2-2, 8/04, controlled)	0.0001	lb/ton
Calculation: (500 ton/hr) * (5,500 hrs/yr) * (0.0001 lb/ton) * (ton/2000 lb) =	<b>0.14</b>	ton/yr

**2009 Metso 6x20 Screen (500 TPH)**

Hours of Operation	5,500	hrs/yr
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Process Rate	500	ton/hr
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**Total PM Emissions:**

Emission Factor (AP 42, Table 11.19.2-2, 8/04)	0.0022	lb/ton
Calculation: (500 ton/hr) * (5,500 hrs/yr) * (0.0022 lb/ton) * (ton/2000 lb) =	<b>3.03</b>	ton/yr

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

Emission Factor (AP 42, Table 11.19.2-2, 8/04)	0.00074	lb/ton
Calculation: (500 ton/hr) * (5,500 hrs/yr) * (0.00074 lb/ton) * (ton/2000 lb) =	<b>1.02</b>	ton/yr

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

Emission Factor (AP 42, Table 11.19.2-2, 8/04)	0.00005	lb/ton
Calculation: (500 ton/hr) * (5,500 hrs/yr) * (0.00005 lb/ton) * (ton/2000 lb) =	<b>0.07</b>	ton/yr

**2009 Metso Lokotrack Crusher Engine (275 bhp) (Tier 3)**

<b><u>Operational capacity of engine (in kw)</u></b>	<b>205 kw</b>
Operational Capacity of Engine = 275 hp	<b>275 hp</b>
Hours of Operation = 5,500 hours/yr	<b>5,500 hours/yr</b>

**PM Emissions:**

(Tier 3,40 CFR 89 Subpart B, Table 1) Emission Factor =	2.00E-01	g/kw-hr
Calculation: (497.14 lbs/yr) * (ton/2000 lb) =	<b>0.25</b>	ton/yr
Calculation: (205 kw) * (5,500 hours/yr) * (0.20 g/kw-hr)* 0.0022046 lb/g =	<b>497.14</b>	lbs/yr

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

(Tier 3,40 CFR 89 Subpart B, Table 1) Emission Factor =	2.00E-01	g/kw-hr
Calculation: (497.14 lbs/yr) * (ton/2000 lb) =	<b>0.25</b>	ton/yr
Calculation: (205 kw) * (5,500 hours/yr) * (0.20 g/kw-hr)* 0.0022046 lb/g =	<b>497.14</b>	lbs/yr

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

(Tier 3,40 CFR 89 Subpart B, Table 1) Emission Factor =	2.00E-01	g/kw-hr
Calculation: (497.14 lbs/yr) * (ton/2000 lb) =	<b>0.25</b>	ton/yr
Calculation: (205 kw) * (5,500 hours/yr) * (0.20 g/kw-hr)* 0.0022046 lb/g =	<b>497.14</b>	lbs/yr

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

(Tier 3,40 CFR 89 Subpart B, Table 1) Emission Factor = 4.00 g/kw-hr  
 Calculation: (814.82 lbs/yr) \* (ton/2000 lb) = **4.97** ton/yr  
 Calculation: (205 kw) \* (5,500 hours/yr) \* (4.00 g/kw-hr) \* 0.0022406 lb/g = **9,942.75** lbs/yr

**CO Emissions:**

(Tier 3,40 CFR 89 Subpart B, Table 1) Emission Factor = 3.50E+00 g/kw-hr  
 Calculation: (814.82 lbs/yr) \* (ton/2000 lb) = **4.35** ton/yr  
 Calculation: (205 kw) \* (5,500 hours/yr) \* (3.50 g/kw-hr) \* 0.0022406 lb/g = **8,699.90** lbs/yr

**VOC Emissions:**

(AP-42, Table 3.3-1, TOC, Exhaust + Crankcase, 10/96) Emission Factor = 2.51E-03 lbs/hp-hr  
 Calculation: (205 kw) \* (5,500 hours/yr) \* (0.00 lbs/hp-hr) \* (ton/2000 lb) = **1.90** ton/yr  
 Calculation: (205 kw) \* (5,500 hours/yr) \* (0.00 lbs/hp-hr)\*0.0022046 lb/g = **3,802.58** lbs/yr

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

(AP-42, Sec. 3.3, Table 3.3-1, 10/96) Emission Factor = 2.05E-03 lbs/hp-hr  
 Calculation: (451.00 hp) \* (5,500 hours/yr) \* (0.0021 lbs/hp-hr) \* (ton/2000 lb) = **1.55** ton/yr  
 Calculation: (451 hp) \* (5,500 hours/yr) \* (0.0021 lbs/hp-hr) = **3,100.63** lbs/yr

**2009 Metso Lokotrack Crusher (440 TPH) - Diesel**

Maximum Process Rate 440 ton/hr

**PM Emissions:**

Emission Factor (AP 42, Table 11.19.2-2, 8/04, controlled) 0.0012 lb/ton  
 Calculation: (440 ton/hr) \* (5,500 hrs/yr) \* (0.0012 lb/ton) \* (ton/2000 lb) = **1.45** ton/yr

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

Emission Factor (AP 42, Table 11.19.2-2, 8/04, controlled) 0.00054 lb/ton  
 Calculation: (440 ton/hr) \* (5,500 hrs/yr) \* (0.00054 lb/ton) \* (ton/2000 lb) = **0.65** ton/yr

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

Emission Factor (AP 42, Table 11.19.2-2, 8/04, controlled) 0.0001 lb/ton  
 Calculation: (440 ton/hr) \* (5,500 hrs/yr) \* (0.0001 lb/ton) \* (ton/2000 lb) = **0.12** ton/yr

**Metso Lokotrack plant - screen (440 TPH)**

Hours of Operation 5,500 hrs/yr

Process Rate 440 ton/hr

**Total PM Emissions:**

Emission Factor (AP 42, Table 11.19.2-2, 8/04) 0.0022 lb/ton  
 Calculation: (500 ton/hr) \* (5,500 hrs/yr) \* (0.0022 lb/ton) \* (ton/2000 lb) = **2.66** ton/yr

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

Emission Factor (AP 42, Table 11.19.2-2, 8/04) 0.00074 lb/ton  
 Calculation: (500 ton/hr) \* (5,500 hrs/yr) \* (0.00074 lb/ton) \* (ton/2000 lb) = **0.90** ton/yr

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

Emission Factor (AP 42, Table 11.19.2-2, 8/04) 0.00005 lb/ton  
 Calculation: (500 ton/hr) \* (5,500 hrs/yr) \* (0.00005 lb/ton) \* (ton/2000 lb) = **0.06** ton/yr

## **Haul Roads**

Vehicle Miles Traveled (Estimated)	5	VMT/day
VMT per Hour	0.21	VMT/hr
Hours of Operation	5,500	hrs/yr
	365	days/yr

### **PM Emissions:**

Emission Factor = $k * (s / 12)^a * (W / 3)^b =$	12.46	lb/VMT
Where: k = constant (Value for PM10, AP 42, Table 13.2.2-2, 11/06)	4.9	lbs/VMT
s = surface silt content (sand/gravel processing, material storage area, Table 13.2.2-1)	7.1	%
W = mean vehicle weight (1994 average loaded/unloaded or a 40 ton truck)	54	tons
a = constant (Value for PM30/TSP, Table 13.2.2-2)	0.7	
b = constant (Value for PM30/TSP, Table 13.2.2-2)	0.45	
Control Efficiency	0	%
Calculation: (5,500 hrs/yr) * (0.21 VMT/hr) * (12.46 lb/VMT) * (ton/2000 lb) =	7.14	tons/yr
Calculation: (5,500 hrs/yr) * (0.21 VMT/hr) * (12.46 lb/VMT) * (ton/2000 lb) * (1-0/100) =	<b>7.14</b>	tons/yr

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

Emission Factor = $k * (s / 12)^a * (W / 3)^b =$	3.43	lb/VMT
Where: k = constant (Value for PM10, AP 42, Table 13.2.2-2, 11/06)	1.5	lbs/VMT
s = surface silt content (sand/gravel processing, material storage area, Table 13.2.2-1)	7.1	%
W = mean vehicle weight (1994 average loaded/unloaded or a 40 ton truck)	54	tons
a = constant (Value for PM30/TSP, Table 13.2.2-2)	0.9	
b = constant (Value for PM30/TSP, Table 13.2.2-2)	0.45	
Control Efficiency	0	%
Calculation: (5,500 hrs/yr) * (0.21 VMT/hr) * (3.43 lb/VMT) * (ton/2000 lb) =	1.97	tons/yr
Calculation: (5,500 hrs/yr) * (0.21 VMT/hr) * (3.43 lb/VMT) * (ton/2000 lb) * (1-0/100) =	<b>1.97</b>	tons/yr

### **PM<sub>2.5</sub> Emissions: (AP 42, Ch. 13.2.2, 11/06)**

Emission Factor = $k * (s / 12)^a * (W / 3)^b =$	0.34	lb/VMT
Where: k = constant (Value for PM10, AP 42, Table 13.2.2-2, 11/06)	0.15	lbs/VMT
s = surface silt content (sand/gravel processing, material storage area, Table 13.2.2-1)	7.1	%
W = mean vehicle weight (1994 average loaded/unloaded or a 40 ton truck)	54	tons
a = constant (Value for PM30/TSP, Table 13.2.2-2)	0.9	
b = constant (Value for PM30/TSP, Table 13.2.2-2)	0.45	
Control Efficiency	0	%
Calculation: (5,500 hrs/yr) * (0.21 VMT/hr) * (0.34 lb/VMT) * (ton/2000 lb) =	0.20	tons/yr
Calculation: (5,500 hrs/yr) * (0.21 VMT/hr) * (0.34 lb/VMT) * (ton/2000 lb) * (1-0/100) =	<b>0.20</b>	tons/yr

## **Conveyor Transfer Points (6) (controlled) - (SCC 3-05-020-06)**

Process Rate	500	ton/hr
Hours of Operation	5,500	hrs/yr
Number of Transfers	6	transfer

### **Total PM Emissions:**

Emission Factor (AP 42, Table 11.19.2-2, 8/04)	0.00014	lb/ton
Calculation: (500 ton/hr) * (5,500 hrs/yr) * (0.00014 lb/ton) * (ton/2000 lb) * (6 transfer) =	<b>1.16</b>	ton/yr

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

Emission Factor (AP 42, Table 11.19.2-2, 8/04) 4.60E-05 lb/ton  
 Calculation: (500 ton/hr) \* (5,500 hrs/yr) \* (0.000046 lb/ton) \* (ton/2000 lb) \* (6 transfer) = **0.38** ton/yr

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

Emission Factor (AP 42, Table 11.19.2-2, 8/04) 1.30E-05 lb/ton  
 Calculation: (500 ton/hr) \* (5,500 hrs/yr) \* (0.000013 lb/ton) \* (ton/2000 lb) \* (6 transfer) = **0.11** ton/yr

**File Forming**

Process Rate 500 ton/hr  
 Hours of Operation 5,500 hrs/yr  
 24 hrs/day  
 Number of Piles 3 piles

**PM Emissions:**

Emission Factor =  $k (0.0032) * (U/5)^{1.3} * (M / 2)^{-1.4} =$  0.00169 lb/ton  
 Where: k = particle size multiplier (value for PM < 30 microns per AP 42, Sec. 13.2.4.3, 11/06) 0.74  
 U = mean wind speed (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06) 8.15 mph  
 M = material moisture content (from previous permit version) 4.00 %  
 Control Efficiency 0 %  
 Calculation: (500 ton/hr) \* (5,500 hrs/yr) \* (0.00169 lb/ton) \* (ton/2000 lb) \* (3 piles) = 6.99 ton/yr  
 Calculation: (500 ton/hr) \* (5,500 hrs/yr) \* (0.00169) \* (ton/2000 lb) \* (3 piles) \* (1 - 0/100) = **6.99** ton/yr

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

Emission Factor =  $k (0.0032) * (U/5)^{1.3} * (M / 2)^{-1.4} =$  0.00080 lb/ton  
 Where: k = particle size multiplier (value for PM < 30 microns per AP 42, Sec. 13.2.4.3, 11/06) 0.35  
 U = mean wind speed (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06) 8.15 mph  
 M = material moisture content (from previous permit version) 4.00 %  
 Control Efficiency 0 %  
 Calculation: (500 ton/hr) \* (5,500 hrs/yr) \* (0.00080 lb/ton) \* (ton/2000 lb) \* (3 piles) = 3.30 ton/yr  
 Calculation: (500 ton/hr) \* (5,500 hrs/yr) \* (0.00080) \* (ton/2000 lb) \* (3 piles) \* (1 - 0/100) = **3.30** ton/yr

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

Emission Factor =  $k (0.0032) * (U/5)^{1.3} * (M / 2)^{-1.4} =$  0.00012 lb/ton  
 Where: k = particle size multiplier (value for PM < 30 microns per AP 42, Sec. 13.2.4.3, 11/06) 0.053  
 U = mean wind speed (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06) 8.15 mph  
 M = material moisture content (from previous permit version) 4.00 %  
 Control Efficiency 0 %  
 Calculation: (500 ton/hr) \* (5,500 hrs/yr) \* (0.00012 lb/ton) \* (ton/2000 lb) \* (3 piles) = 0.50 ton/yr  
 Calculation: (500 ton/hr) \* (5,500 hrs/yr) \* (0.00012) \* (ton/2000 lb) \* (3 piles) \* (1 - 0/100) = **0.50** ton/yr

**Bulk Loading**

Process Rate 500 ton/hr  
 Hours of Operation 5,500 hrs/yr  
 Number of Loads 1 load

**PM Emissions: Assuming PM= PM10 = PM2.5**

Emission Factor	1.60E-05	lb/ton
Control Efficiency	0	%
Calculation: (500 ton/hr) * (5,500 hrs/yr) * (0.00002 lb/ton) * (ton/2000 lb) * (1 load) =	0.02	ton/yr
Calculation: (500 ton/hr) * (5,500 hrs/yr) * (0.00002 lb/ton) * (ton/2000 lb) * (1 load) * (1 - 0/100) =	<b>0.02</b>	ton/yr

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

Emission Factor	1.60E-05	lb/ton
Control Efficiency	0	%
Calculation: (500 ton/hr) * (5,500 hrs/yr) * (0.00002 lb/ton) * (ton/2000 lb) * (1 load) =	0.02	ton/yr
Calculation: (500 ton/hr) * (5,500 hrs/yr) * (0.00002 lb/ton) * (ton/2000 lb) * (1 load) * (1 - 0/100) =	<b>0.02</b>	ton/yr

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

Emission Factor = k (0.0032) * (U/5) <sup>1.3</sup> * (M / 2) <sup>-1.4</sup> = 0.00002 lb/ton	1.60E-05	lb/ton
Control Efficiency	0	%
Calculation: (500 ton/hr) * (5,500 hrs/yr) * (0.00002 lb/ton) * (ton/2000 lb) * (1 load) =	0.02	ton/yr
Calculation: (500 ton/hr) * (5,500 hrs/yr) * (0.00002 lb/ton) * (ton/2000 lb) * (1 load) * (1 - 0/100) =	<b>0.02</b>	ton/yr

V. Air Quality Impacts

This permit contains conditions and limitations that would protect air quality for the site and surrounding area. Furthermore, this facility is a portable source that would operate on an intermittent and temporary basis, so any effects to air quality will be minor and of limited duration.

VI. Ambient Air Impact Analysis

Based on the information provided and the conditions established in MAQP #4726-00, the Department determined that the impact from this permitting action will be minor. The Department believes it will not cause or contribute to a violation of any ambient air quality standard.

VII. Taking or Damaging Implication Analysis

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

YES	NO	
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)

YES	NO	
	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.

#### VIII. 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:* Hexco, LLC

*Montana Air Quality Permit (MAQP) number:* 4726-00

*Preliminary Determination Issued:* March 28, 2012

*Department Decision Issued:* April 13, 2012

*Permit Final:* May 1, 2012

1. *Legal Description of Site:* Hexco, LLC (Hexco) submitted an application to operate a portable crushing/screening plant to initially be located at Section 4, Township 26N, Range 56 E, Richland County, Montana. MAQP #4726-00 would apply while operating at any location in Montana, except those areas having a Department of Environmental Quality (Department)-approved permitting program, areas considered tribal lands, or areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) nonattainment areas. A *Missoula County* air quality permit would 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:* Hexco proposes the construction and operation of a portable crushing/screening operation that would consist of 2 crushing/screening plants, (Plant 1 and Plant 2) an engine/generator, and associated equipment.
3. *Objectives of Project:* The objective of this project would be to produce revenue for Hexco through the sale and use of scoria. The issuance of the permit would allow Hexco to operate the permitted equipment at various locations throughout Montana, including the 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 Hexco 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 MAQP #4726-00.
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

The scoria mine permit area would be approximately 66-acres, however the disturbances would be anticipated to be approximately 25-acres. There is a possibility that terrestrials would use the same area as the project. The application states that there are isolated woody areas that provide cover and browsing areas for deer, antelope, and bird species but, that no fish habitat would be anticipated within 1,000 feet of the main permit area. At the time of the Montana Natural Heritage Program (MNHP) site visit, cattle and cattle trails were present though no sensitive species were noted. Relatively few exotic species were noted but not specified, though it can be deduced from the species list to include some Chenopods, but no noxious weeds. Species of concern in the area include the whooping crane which is listed as endangered by the United States (U.S.) Fish & Wildlife Service and the U.S. Endangered Species Act.

The crushing and screening operation would be considered a minor source of emissions, by industrial standards, with intermittent and seasonal operations. Therefore, only minor and temporary effects on terrestrial and aquatic life would be expected as a result of equipment operations or from pollutant deposition.

B. Water Quality, Quantity and Distribution

According to the MNHP, the area is sub-irrigated by the waters from hardscrabble Creek. These waters carry dissolved salts that are then deposited in the meadow with continued evapotranspiration of surface water. The application states that the receiving water in the area is an ephemeral channel that drains to East Hardscrabble Creek. No point source discharge would occur as a result of the scoria mining operations and crushing operations. Rather storm water would sheet flow across the land above the ephemeral channel. Once storm water enters the ephemeral channel, it would flow via shallow concentrated flow or open-channel flow approximately 1 mile to the confluence with East Hardscrabble Creek.

Water would be used for dust suppression on the surrounding roadways and areas of operation and for pollution control for equipment operations. However, water use would only cause a minor impact to the water quality, quantity, and distribution in the area, since only small amounts of water would be required to control air pollutant emissions and deposition of air pollutants (as described in Section 7.F of this EA). Therefore, the Department determined that there would be minor effects to water quality, quantity and distribution.

C. Geology and Soil Quality, Stability and Moisture

Geology in the area and the source material “scoria” is referred to by the United States Geological Survey (USGS) as Qc Clinker (Holocene and late Pleistocene) – very resistant red, pink, orange, black, and yellow metamorphosed shale, siltstone, and sandstone of Fort Union Formation and local till. Bedrock was baked by natural burning of underlying lignite. Locally, baked rock melted and fused to form buchite, a black, glassy, vesicular, or scoracious rock. Clinker is very resistant to erosion and caps hill or knolls and forms ledges on steep slopes.

Because the equipment would be operating at a facility which would be considered a minor source of emissions by industrial standards, impacts from the emissions from the crushing facility would be minor. The crushing and screening operation would have only minor impacts on soils in any proposed site location because the facility is relatively small in size, would use only relatively small amounts of water for pollution control, and would only have seasonal and intermittent operations. Therefore, any affects upon geology and soil quality, stability, and moisture at any proposed operational site would be minor.

D. Vegetation Cover, Quantity, and Quality

The application states that generally, the main permit area is sparsely vegetated with creeping juniper dominating, or areas surrounded by mixed herbaceous vegetation including prairie sandreed and prairie junegrass, fescue, silver sagebrush, and purple coneflower. According to the Richland County Weed Coordinator there is some leafy spurge on site and is currently being controlled. According to the Natural Heritage Program, only one plant community, Baltic rush (*Juncus balticus*) is explicitly stated to occupy this area.

Because the equipment would be a minor source of emissions by industrial standards, impacts from the emissions from the crushing and screening facility would also be minor. As described in Section 7.F of this EA, the amount of air emissions from this facility would be minor. As a result, the corresponding deposition of the air pollutants on the surrounding vegetation would also be minor.

E. Aesthetics

The mine permit area would be approximately 66-acres, however the disturbances would be anticipated to be approximately 25-acres. The application states that the landform associated with scoria generally forms a fractured rounded cap rock in the area and the site occurs on primarily ridges and rolling hills that is typical of the area. The disturbance areas would be reclaimed with a minimum of 12-inches of prepared soil/seedbed and fine-grained soils that are susceptible to compaction and will be worked as necessary to alleviate compaction. Erosion control measures would be maintained until final stabilization is achieved. Recreation in the area is limited, and mainly for hunting purposes. There are no known unique recreational opportunities found nearby. The equipment would be visible and would create additional noise while operating in these areas. Typical noise levels with gravel and crushing operations are estimated at 100 decibels (db(A)). Due to the remote location, the application states that the nearest residence and structure not associated with the crushing and screening operation is

approximately one mile east of the proposed facility, noise was not addressed by the applicant in detail. MAQP #4726-00 would include conditions to control emissions, including visible emissions, from the plant. Also, because the crushing and screening operation would be portable, would operate on an intermittent and seasonal basis, and would typically locate within an open-cut pit, any visual and noise impacts would be minor and short-lived.

#### F. Air Quality

The air quality impacts from the equipment would be minor because the facility is relatively small and would be used on a temporary and intermittent basis. Additionally, the small and intermittent amounts of deposition generated from the crushing/screening operation would be minimal because the pollutants emitted would be well controlled, widely dispersed (from such factors as wind speed and wind direction) and would have minimal deposition on the surrounding area. MAQP #4726-00 would include conditions limiting the opacity from the plant, as well as requiring water spray bars and other means to control air pollution. Further, MAQP #4726-00 would limit total emissions from the crushing and screening operation and any additional Hexco equipment operated at the site to 250 tons/year or less, excluding fugitive emissions. Therefore, the Department determined that compliance with all of the permit conditions would ensure that effects to the local air quality would be minor.

#### G. Unique Endangered, Fragile, or Limited Environmental Resources

The proposed project would impact the unique endangered, fragile, or limited environmental resources because emissions of PM<sub>10</sub>, oxides of nitrogen (NO<sub>x</sub>), carbon monoxide (CO), volatile organic compounds (VOC), and sulfur dioxide (SO<sub>2</sub>) would increase in the area due to the operation of the facility. The Department, in an effort to assess any potential impacts to unique, endangered, fragile, or limited environmental resources in the initial proposed area of operation, contacted the MNHP. MNHP conducted a search of the defined area which is defined by the township and range of the proposed site, with an additional one-mile buffer. Results of the search indicated that no sensitive species were noted at the time of the initial visit to collect data. Relative few exotic species were noted but not specified though it can be deduced from the species list to include some Chenopods, but no noxious weeds. Given the relatively small size of the facility and the temporary and portable nature of the operations, any impacts would be minor and short-lived. Additionally, operational conditions and limitations within MAQP #4726-00 would aid in the protection of these resources by protecting the surrounding environment. Therefore, impacts to unique, endangered, fragile, or limited environmental resources would be minor.

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

Due to the size of the facility, the crushing and screening operation would require only small quantities of water, air, and energy for proper operation. Small quantities of water would be used for dust suppression and would control particulate emissions being generated at the site. Energy requirements would also be small because the energy demands of the crushing and screening operation would be relatively small and the facility would not be used continuously. The facility would have limited production, and would have seasonal and intermittent use. In addition, impacts to air resources would be minor because the source is small by industrial standards, with intermittent and seasonal operations, and because air pollutants generated by the facility would be widely dispersed. The Department determined that any impacts to water, air, and energy resources in any given area would be minor due to the dispersion characteristics of the pollutants, the atmosphere, and the conditions contained in MAQP #4726-00.

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 area of operation. According to their records there are no previously recorded sites in the area of the proposed project location and there is 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 this project.

J. Cumulative and Secondary Impacts

The additional equipment would cause minor cumulative and secondary impacts to the physical and biological aspects of the human environment because the facility would generate emissions of PM and PM<sub>10</sub>. Noise would also be generated from the site. Emissions and noise would cause minimal disturbance because the equipment is small and the facility would be expected to operate in areas designated and used for such operations. Additionally, this facility, in combination with the other emissions from equipment operations at the operational site, would not be permitted to exceed 250 tons per year of non-fugitive emissions. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as outlined in MAQP #4726-00. Overall, any cumulative or secondary impacts to the physical and biological aspects of the human environment would be minor.

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

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

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

A. Social Structures and Mores

The proposed project would cause minor, if any, impacts or disruptions to native or traditional lifestyles or communities (social structures or mores) in the area because the proposed project would take place in a relatively remote location and because the source is a minor source of emissions (by industrial standards) and would only have intermittent operations. Further, the

facility would be required to operate according to the conditions that would be placed in MAQP #4726-00. Therefore, the existing social structures and mores would not be affected as a result of this permitting action.

B. Cultural Uniqueness and Diversity

The impact to cultural uniqueness and diversity of these areas would be minor from the proposed equipment because the site will be located on ground previously used as cattle grazing. Additionally, the facility would be considered a portable/temporary source with seasonal and intermittent operations. The predominant use of the surrounding area would not change as a result of this project. Therefore, the Department determined that there would be minor effects to cultural uniqueness and diversity.

C. Local and State Tax Base and Tax Revenue

The crushing/screening operations would have little, if any, impact on the local and state tax base and tax revenue because the facility would be a temporary source and small by industrial standards. The facility operations would employ only 3 to 5 employees. Thus, only minor impacts to the local and state tax base and revenue could be expected from the employees and facility production. Furthermore, the impacts to local tax base and revenue would be expected to be minor because the source would be portable and the money generated for taxes would be widespread. Therefore, the Department determined that there would be minor effects to local and state tax base and tax revenue.

D. Agricultural or Industrial Production

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

E. Human Health

MAQP #4726-00 would incorporate conditions to ensure that the crushing facility would operate in compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health. As described in Section 7.F. of this EA, the air emissions from this facility would be minimized by the use of water spray and other conditions that would be established in MAQP #4726-00. Therefore, only minor impacts would be expected upon human health from the proposed crushing/screening facility.

F. Access to and Quality of Recreational and Wilderness Activities

The application states that there is State and Federal land in the vicinity with limited access. Recreation in the area is limited, and mainly for hunting purposes. The crushing/screening plant would be operated at a permitted open-cut pit and would have a minor impact upon the access to and quality of recreational and wilderness activities because the facility would be operating on private property and accessed through private land. Additionally, noise from the facility would be minor because the facility would typically operate within the confines of an open-cut pit. Also, the facility would be considered a small and temporary source. Thus, any changes in the quality of recreational and wilderness activities from noise, created by operating the equipment at the site, would be minor and intermittent.

#### G. Quantity and Distribution of Employment

The portable crushing and screening operation would be considered small and would only require a few additional employees to operate. The crushing and screening operation would be considered a portable source, with seasonal and intermittent operations and would not be expected to have any long-term effects upon the quantity and distribution of employment in any given area of operation. The application states that there are currently no employed personnel at the site and anticipates that 3 to 5 additional staff would be hired for the proposed operations. Therefore, minor effects upon the quantity and distribution of employment in these areas would be expected.

#### H. Distribution of Population

The application states that the nearest residence and structure not associated with the crushing and screening operation is approximately one mile east of the proposed facility. The portable crushing and screening operation would be considered small by industrial standards and would only require a few additional employees to operate. Also, no individuals would be expected to permanently relocate to a given area of operation as a result of operating the crushing facility, which would have only intermittent and seasonal operations. Therefore, the crushing facility would not disrupt the normal population distribution in the initial area of operation or any future operating site.

#### I. Demands for Government Services

Minor increases would be seen in traffic on existing roadways in the area while the crushing/screening operates. In addition, government services would be required for acquiring the appropriate permits from government agencies. Demands for government services would be minor.

#### J. Industrial and Commercial Activity

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

#### K. Locally Adopted Environmental Plans and Goals

The Department is not aware of any locally adopted environmental plans or goals that would be affected by the proposed project. MAQP #4726-00 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 crushing and screening operation would cause minor cumulative and secondary impacts to the social and economic aspects of the human environment in the immediate areas of operation because the source would be a portable and temporary source. Small increases in traffic would have minor effects on local traffic in the immediate area. Because the source would be relatively small, temporary source, only minor economic impacts to the local economy could be expected from the operation of the plant. The Department believes that this plant could be expected to operate in compliance with all applicable rules and regulations as would be outlined in MAQP #4726-00.

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

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permitting action is for the construction and operation of a portable crushing/screening facility. MAQP #4726-00 includes 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

EA prepared by: Deanne Fischer

Date: March 9, 2012