# AIR QUALITY PERMIT

Issued To: United Materials of Great Falls, Inc.
P.O. Box 1690
Great Falls, MT 59403-1690

Permit #2941-02
Application Complete: 11/03/05
Preliminary Determination Issued: 11/14/05
Department Decision Issued: 12/15/05
Permit Final: 12/31/05
AFS #: 777-2941

An air quality permit, with conditions, is hereby granted to United Materials of Great Falls, Inc. (United), pursuant to Section 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and the Administrative Rules of Montana (ARM) 17.8.701, *et seq*., as amended, for the following:

Section I: Permitted Facilities

A. Plant Location:

United operates a portable crushing/screening operation at various locations throughout Montana. Permit #2941-02 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 ($PM_{10}$) nonattainment areas. A Missoula County air quality permit will be required for locations within Missoula County, Montana. An addendum to Permit #2941-02 will be required for operations located in or within 10 km of certain $PM_{10}$ nonattainment areas. A list of the permitted equipment is contained in Section I.A of the permit analysis.

B. Current Permit Action:

On November 3, 2005, United submitted a complete permit application to modify plant operations. Specifically, the current permit action adds a Nordberg 6' x 20' 3-deck screen (1000 ton per hour (tph)), a Nordberg HP300 cone crusher (1000 tph), and various material handling conveyors. In addition, the current permit action removes an existing Nordberg HP200 cone crusher (1000 tph) from permitted operations.

Further, potential uncontrolled emissions from modified United operations exceed the applicable major source Title V Operating Permit program threshold. However, in an effort to avoid Title V Operating Permit program applicability, United proposed a synthetic-minor (SM) limit on facility operations. After consultation with the Department, United proposed an enforceable plant-wide production limit of 2,000,000 tons during any rolling 12-month time period. Limiting production to a maximum of 2,000,000 tons per year, results in allowable plant-wide emissions at a level less than 80% of the applicable Title V operating permit program emission threshold thereby avoiding Title V SM-80 regulatory status.

Section II: Limitations and Conditions

A. Emission Limitations

1. Any visible emissions from the cone crushers shall not exhibit an opacity of 15% or greater averaged over six consecutive minutes (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart OOO).

2. United shall not cause or authorize to be discharged into the atmosphere from the material screens and any other affected equipment manufactured after August 31, 1983, any visible emissions that exhibit an opacity of 10% or greater averaged over six consecutive minutes (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart OOO).

3. United shall not cause or authorize to be discharged into the atmosphere from any other associated equipment any visible emissions that exhibit an opacity of 20% or greater averaged over six consecutive minutes (ARM 17.8.304 and ARM 17.8.752).

4. United 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. Emissions of airborne particulate matter from any source shall not exhibit an opacity of 20% or greater averaged over six consecutive minutes (ARM 17.8.308).

5. United 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.4 (ARM 17.8.749 and ARM 17.8.752).

6. Water spray bars shall be available on site at all times and operated, as necessary, to maintain compliance with the opacity limitations in Sections II.A.1, II.A.2, and II.A.3 (ARM 17.8.752).

7. If the permitted equipment is used in conjunction with any other equipment owned or operated by United, 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 time period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).

8. United shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart OOO, for the crushing/screening plant (ARM 17.8.340 and 40 CFR 60, Subpart OOO).

9. Total plant production shall be limited to 2,000,000 tons during any rolling 12-month time period (ARM 17.8.749).

10. The 1250 kW diesel generator shall be limited to a maximum of 3000 hours of operation during any rolling 12-month time period (ARM 17.8.749).

B. Testing Requirements

1. Within 60 days after achieving the maximum production rate, but not 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 the Nordberg HP300 cone crusher, the Nordberg FS303 6' x 20' 3-deck screen, and all other affected equipment added to United operations under Permit Action #2941-02, to demonstrate compliance with the emission limitations contained in Sections II.A.1 and II.A.2. After the initial source test, testing shall continue as required by the Department (ARM 17.8.105, ARM 17.8.340, 40 CFR Part 60, General Provisions and Subpart OOO).

2. All compliance source tests shall be conducted in accordance with 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. In addition, a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area where the transfer is to be made, at least 15 days prior to the move. The Intent to Transfer form and the proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.734).

2. United shall maintain on-site records showing daily hours of operation and daily production rates for the last 12 months. All records compiled in accordance with this permit shall be maintained by United as a permanent business record for at least five years following the date of the measurement, shall be submitted to the Department upon request, and shall be available at the plant site for inspection by the Department (ARM 17.8.749).

3. United shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the emission inventory report and sources identified in Section I.A of the permit analysis.

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

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

5. United shall document, by month, the total plant production. By the 25th day of each month, United shall calculate the plant production for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.9. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

6. United shall document, by month, the hours of diesel generator operation. By the 25th day of each month, United shall total the diesel generator operating hours for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.10. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

7. United shall annually certify that its emissions are less than those that would require the facility to obtain an air quality operating permit as required by ARM 17.8.1204(3)(b). The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emissions inventory information (ARM 17.8.749 and ARM 17.8.1204).

Section III: General Conditions

A. Inspection – United 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 (CEMS, 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 United fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving United 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 it's decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.

F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by Department personnel, at the location of the permitted source.

G. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by United may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.

H. Construction Commencement – Construction must begin within three years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked (ARM 17.8.762).

I. The Department may modify the conditions of this permit based on local conditions of any future site. These factors may include, but are not limited to, local terrain, meteorological conditions, proximity to residences, etc.

J. United shall comply with the conditions contained in this permit while operating in any location in Montana, except within those areas that have a Department-approved permitting program.

PERMIT ANALYSIS
United Materials of Great Falls, Inc.
Permit #2941-02

I. Introduction/Process Description

A. Permitted Equipment

United Materials of Great Falls, Inc. (United), operates three cone crushers, each with a maximum production capacity of 1000 tons per hour (tph); three material screens, each with a maximum production capacity of 1000 tph; a 1250 kilowatt (kW) diesel generator; and associated material handling equipment.

B. Process Description

United proposes to use this crushing/screening plant and associated equipment to crush and sort sand and gravel materials that will be used in various construction activities. For a typical operational setup, materials are loaded into a trap and onto a series of conveyors for transport to the primary screen. From the primary screen, material is transported to either the primary cone crusher, one of the secondary screens, or stockpiled. Materials from the primary cone crusher are crushed and sent onto the secondary screen(s). From that point, the materials are sent onto the secondary and tertiary cone crushers and recycled back through the secondary screen(s) until the materials are properly sized.

C. Permit History

On August 31, 1992, Cascade County Permit #92-296 was issued to United to operate a portable 1991 Nutech Jaw Crusher, a 1991 Nutech Impact Crusher, and associated equipment in the E ½, Section 16, Township 20 North, Range 4 East in Cascade County, Montana. Subsequently, the Cascade County permit was replaced with the state of Montana permit when Cascade County terminated their permitting program.

On June 5, 1996, United submitted a state permit application to operate under the name of Montana Sand and Gravel. On September 12, 1996, Montana Sand and Gravel was issued Permit **#2941-00** by the state of Montana to operate the aforementioned equipment at the NW ¼ of the SE ¼ of Section 16, Township 20 North, Range 4 East, in Cascade County, Montana.

On August 22, 2001, United submitted a complete permit application for the replacement of a portable 1991 Nutech Jaw Crusher (maximum capacity 490 tph), a 1991 Nutech Impact Crusher (maximum capacity 490 tph), a 1991 primary screen (maximum capacity 490 tph), a 1991 twin screen (maximum capacity 490 tph), a 1991 feed hopper, a 1991 sandstone hopper, a 1991 sand hopper, four 1991 conveyors, a 350 kW Detroit Diesel Generator, and associated equipment with a 1996 Nordberg Cone Crusher (maximum capacity 1000 tph), a 1997 Nordberg Cone Crusher (maximum capacity 1000 tph), a 1998 Nordberg Cone Crusher (maximum capacity 1000 tph), two 2000 Deister Screens (maximum capacity 1000 tph each), a 1250 kW diesel generator, and associated equipment. On August 30, 2001, Montana Sand and Gravel requested a name change to again operate the permitted equipment

under the name United. The permit was also updated to reflect the current format for writing permits. Permit **#2941-01** replaced Permit #2941-00.

D. Current Permit Action

On November 3, 2005, United submitted a complete permit application to modify plant operations. Specifically, the current permit action adds a Nordberg 6' x 20' 3-deck screen (1000 ton tph), a Nordberg HP300 cone crusher (1000 tph), and various material handling conveyors. In addition, the current permit action removes the existing Nordberg HP200 cone crusher (1000 tph) from permitted operations.

Further, potential uncontrolled emissions from United operations exceed the applicable major source Title V Operating Permit program threshold. However, in an effort to avoid Title V Operating Permit program applicability, United proposed a synthetic-minor (SM) limit on facility operations. After consultation with the Department, United proposed an enforceable plant-wide production limit of 2,000,000 tons during any rolling 12-month time period. Limiting production to a maximum of 2,000,000 tons per year, results in allowable plant-wide emissions at a level less than 80% of the applicable Title V operating permit program emission threshold thereby avoiding Title V SM-80 regulatory status. Permit **#2941-02** replaces Permit #2941-01.

E. Additional Information

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

## II. Applicable Rules and Regulations

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

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

1. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment, including instruments and sensing devices, and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.

2. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source, or other

entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq*., Montana Code Annotated (MCA).

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

3. ARM 17.8.110 Malfunctions. 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 four hours.

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

B. ARM 17.8, Sub-Chapter 2, Ambient Air Quality, including, but not limited to:

1. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
2. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
3. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
4. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
5. ARM 17.8.223 Ambient Air Quality Standard for PM-10

United must comply with the applicable ambient air quality standards.

C. ARM 17.8, Sub-Chapter 3, Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged to an outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.

2. ARM 17.8.308 Particulate Matter Airborne. Under this section, United 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 17.8.340 Standard of Performance for New Stationary Sources. The owner and operator of any stationary source or modification, as defined and applied in 40 CFR Part 60, shall comply with the standards and provisions of 40 CFR Part 60. Based on the information submitted by United in the application for permit modification, all cone crushers, material screens, and other affected equipment are subject to the NSPS requirements contained in 40 CFR Part 60, Subpart A, General Provisions, and Subpart OOO, Non-Metallic Mineral Processing Plants.

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

1. ARM 17.8.504 Air Quality Permit Application Fees. United shall 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. United 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. This 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, alter, or use any asphalt plant, crusher or screen that has the Potential to Emit (PTE) greater than 15 tons per year of any pollutant. United has a PTE greater than 15 tons per year of particulate matter, particulate matter with an aerodynamic diameter less than or equal to 10 microns ($PM_{10}$), oxides of nitrogen (NOx), 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. United 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. United submitted an affidavit of publication of public notice for the October 22, 2005, issue of the *Great Falls Tribune*, a newspaper of general circulation in the town 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 IV of this permit analysis.

8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.

9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving United of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq*.

10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.

11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.

12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of

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

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

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

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this sub-chapter.

2. ARM 17.8.818 Review of Major Stationary Sources and Major 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 Federal Clean Air Act (FCAA) that it would emit, except as this sub-chapter would otherwise allow.

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

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 > 10 ton/year of any one Hazardous Air Pollutant (HAP), PTE > 25 ton/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule.

   b. PTE > 100 ton/year of any pollutant.

   c. Sources with the PTE > 70 ton/year of PM-10 in a serious PM-10 nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. Title V

of the FCAA Amendments of 1990 requires that all sources, as defined in ARM 17.8.1204 (1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #2941-02 for United, the following conclusions were made:

a. The facility's PTE is less than 100 ton/year for any pollutant.

b. The facility's PTE is less than 10 ton/year for any one HAP and less than 25 ton/year of all HAPs.

c. This source is not located in a serious $PM_{10}$ nonattainment area.

d. This facility is not subject to any current NESHAP standards.

e. This source is not a Title IV affected source nor a solid waste combustion unit.

f. This source is not an EPA designated Title V sources.

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

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

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

United has taken federally enforceable permit limits to keep potential emissions below major source permitting thresholds. Therefore, the facility is not a major source and, thus a Title V operating permit is not required.

3. ARM 17.8.1207 Certification of Truth, Accuracy, and Completeness. United shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit as required by ARM 17.8.1204 (3)(b). The annual certification shall comply with requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emission inventory information.

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

## III. Emission Inventory

| Potential to Emit (ton/year) * | | | | | | |
|---|---|---|---|---|---|---|
| **Emitting Unit** | **PM** | **$PM_{10}$** | **NOx** | **CO** | **SOx** | **VOC** |
| Cone Crusher #1 (1000 tph) | 2.50 | 1.20 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cone Crusher #2 (1000 tph) | 2.50 | 1.20 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cone Crusher #3 (1000 tph) | 2.50 | 1.20 | 0.00 | 0.00 | 0.00 | 0.00 |
| Screen #1 (1000 tph) | 15.75 | 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Screen #2 (1000 tph) | 15.75 | 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Screen #3 (1000 tph) | 15.75 | 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Material Transfer | 72.50 | 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Pile Forming | 16.80 | 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Bulk Loading | 8.40 | 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Haul Roads | 2.74 | 1.23 | 0.00 | 0.00 | 0.00 | 0.00 |
| Diesel Generator (1250 kW) | 5.53 | 5.53 | 77.95 | 16.80 | 5.51 | 6.21 |
| **Total** | **160.72** | **79.86** | **77.95** | **16.80** | **5.51** | **6.21** |

* Potential emissions based on federally enforceable production limit of 2,000,000 tons per year and a maximum diesel generator operating scenario of 3000 hours per year.

Crusher #1 (1000 tph)

Maximum Process Rate: 1000 ton/hr
Hours of Operation: 2000 hr/yr

PM Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.005 lb/ton (AP-42, Table 11.19.2-2, 01/95) | |
| Control Efficiency | 50% (Water Spray) | |
| Calculations: | 0.005 lb/ton * 1000 ton/hr = | 5.00 lb/hr |
| | 5.00 lb/hr * 2000 hr/yr * 0.0005 ton/lb = | 5.00 ton/yr |
| | 5.00 ton/yr * 50% control = | 2.50 ton/yr |

$PM_{10}$ Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.0024 lb/ton (AP-42, Table 11.19.2-2, 01/95 | |
| Control Efficiency | 50% (Water Spray) | |
| Calculations: | 0.0024 lb/ton * 1000 ton/hr = | 2.40 lb/hr |
| | 2.40 lb/hr * 2000 hr/yr * 0.0005 ton/lb = | 2.40 ton/yr |
| | 2.40 ton/yr * 50% control = | 1.20 ton/yr |

Crusher #2 (1000 tph)

Maximum Process Rate: 1000 ton/hr
Hours of Operation: 2000 hr/yr

PM Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.005 lb/ton (AP-42, Table 11.19.2-2, 01/95) | |
| Control Efficiency | 50% (Water Spray) | |
| Calculations: | 0.005 lb/ton * 1000 ton/hr = | 5.00 lb/hr |
| | 5.00 lb/hr * 2000 hr/yr * 0.0005 ton/lb = | 5.00 ton/yr |
| | 5.00 ton/yr * 50% control = | 2.50 ton/yr |

$PM_{10}$ Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.0024 lb/ton (AP-42, Table 11.19.2-2, 01/95 | |
| Control Efficiency | 50% (Water Spray) | |
| Calculations: | 0.0024 lb/ton * 1000 ton/hr = | 2.40 lb/hr |
| | 2.40 lb/hr * 2000 hr/yr * 0.0005 ton/lb = | 2.40 ton/yr |

| | | |
|---|---|---|
| | 2.40 ton/yr * 50% control = | 1.20 ton/yr |

Crusher #3 (1000 tph)

Maximum Process Rate: 1000 ton/hr
Hours of Operation: 2000 hr/yr

PM Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.005 lb/ton (AP-42, Table 11.19.2-2, 01/95) | |
| Control Efficiency | 50% (Water Spray) | |
| Calculations: | 0.005 lb/ton * 1000 ton/hr = | 5.00 lb/hr |
| | 5.00 lb/hr * 2000 hr/yr * 0.0005 ton/lb = | 5.00 ton/yr |
| | 5.00 ton/yr * 50% control = | 2.50 ton/yr |

$PM_{10}$ Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.0024 lb/ton (AP-42, Table 11.19.2-2, 01/95) | |
| Control Efficiency | 50% (Water Spray) | |
| Calculations: | 0.0024 lb/ton * 1000 ton/hr = | 2.40 lb/hr |
| | 2.40 lb/hr * 2000 hr/yr * 0.0005 ton/lb = | 2.40 ton/yr |
| | 2.40 ton/yr * 50% control = | 1.20 ton/yr |

Screen #1 (1000 tph)

Maximum Process Rate: 1000 ton/hr
Hours of Operation: 2000 hr/yr

PM Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.0315 lb/ton (AP-42, Table 11.19.2-2, 01/95) | |
| Control Efficiency | 50% (Water Spray) | |
| Calculations: | 0.0315 lb/ton * 1000 ton/hr = | 31.50 lb/hr |
| | 31.50 lb/hr * 2000 hr/yr * 0.0005 ton/lb = | 31.50 ton/yr |
| | 31.50 ton/yr * 50% control = | 15.75 ton/yr |

$PM_{10}$ Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.015 lb/ton (AP-42, Table 11.19.2-2, 01/95) | |
| Control Efficiency | 50% (Water Spray) | |
| Calculations: | 0.015 lb/ton * 1000 ton/hr = | 15.00 lb/hr |
| | 15.00 lb/hr * 2000 hr/yr * 0.0005 ton/lb = | 15.00 ton/yr |
| | 15.00 ton/yr * 50% control = | 7.50 ton/yr |

Screen #2 (1000 tph)

Maximum Process Rate: 1000 ton/hr
Hours of Operation: 2000 hr/yr

PM Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.0315 lb/ton (AP-42, Table 11.19.2-2, 01/95) | |
| Control Efficiency | 50% (Water Spray) | |
| Calculations: | 0.0315 lb/ton * 1000 ton/hr = | 31.50 lb/hr |
| | 31.50 lb/hr * 2000 hr/yr * 0.0005 ton/lb = | 31.50 ton/yr |
| | 31.50 ton/yr * 50% control = | 15.75 ton/yr |

$PM_{10}$ Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.015 lb/ton (AP-42, Table 11.19.2-2, 01/95) | |
| Control Efficiency | 50% (Water Spray) | |
| Calculations: | 0.015 lb/ton * 1000 ton/hr = | 15.00 lb/hr |
| | 15.00 lb/hr * 2000 hr/yr * 0.0005 ton/lb = | 15.00 ton/yr |
| | 15.00 ton/yr * 50% control = | 7.50 ton/yr |

Screen #3 (1000 tph)

Maximum Process Rate: 1000 ton/hr
Hours of Operation: 2000 hr/yr

PM Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.0315 lb/ton (AP-42, Table 11.19.2-2, 01/95) | |
| Control Efficiency | 50% (Water Spray) | |
| Calculations: | 0.0315 lb/ton * 1000 ton/hr = | 31.50 lb/hr |
| | 31.50 lb/hr * 2000 hr/yr * 0.0005 ton/lb = | 31.50 ton/yr |
| | 31.50 ton/yr * 50% control = | 15.75 ton/yr |

$PM_{10}$ Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.015 lb/ton (AP-42, Table 11.19.2-2, 01/95) | |
| Control Efficiency | 50% (Water Spray) | |
| Calculations: | 0.015 lb/ton * 1000 ton/hr = | 15.00 lb/hr |
| | 15.00 lb/hr * 2000 hr/yr * 0.0005 ton/lb = | 15.00 ton/yr |
| | 15.00 ton/yr * 50% control = | 7.50 ton/yr |

Material Transfer

Maximum Process Rate: 1000 ton/hr
Number of Transfers: 50 Transfers
Hours of Operation: 2000 hr/yr

PM Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.0029 lb/ton (AP-42, Table 11.19.2-2, 01/95) | |
| Control Efficiency | 50% (Water Spray) | |
| Calculations: | 0.0029 lb/ton * 1000 ton/hr * 50 transfers = | 145.00 lb/hr |
| | 145.00 lb/hr * 2000 hr/yr * 0.0005 ton/lb = | 145.00 ton/yr |
| | 145.00 ton/yr * 50% control = | 72.50 ton/yr |

$PM_{10}$ Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.0014 lb/ton (AP-42, Table 11.19.2-2, 01/95) | |
| Control Efficiency | 50% (Water Spray) | |
| Calculations: | 0.0014 lb/ton * 1000 ton/hr * 50 transfers = | 70.00 lb/hr |
| | 70.00 lb/hr * 2000 hr/yr * 0.0005 ton/lb = | 70.00 ton/yr |
| | 70.00 ton/yr * 50% control = | 35.00 ton/yr |

Pile Forming

Maximum Process Rate: 1000 ton/hr
Number of Piles: 2 Piles
Hours of Operation: 2000 hr/yr

PM Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.0084 lb/ton (AP-42, Table 8.23-4, moisture content > 4% by weight, 08/82) | |
| Control Efficiency | 50% (Water Spray) | |
| Calculations: | 0.0084 lb/ton * 1000 ton/hr * 2 piles = | 16.80 lb/hr |
| | 16.80 lb/hr * 2000 hr/yr * 0.0005 ton/lb = | 16.80 ton/yr |
| | 16.80 ton/yr * 50% control = | 8.40 ton/yr |

$PM_{10}$ Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.004 lb/ton (AP-42, Table 8.23-4, moisture content > 4% by weight, 08/82) | |
| Control Efficiency | 50% (Water Spray) | |
| Calculations: | 0.004 lb/ton * 1000 ton/hr * 2 piles = | 8.00 lb/hr |
| | 8.00 lb/hr * 2000 hr/yr * 0.0005 ton/lb = | 8.00 ton/yr |
| | 8.00 ton/yr * 50% control = | 4.00 ton/yr |

Bulk Loading

| | |
|---|---|
| Maximum Process Rate: | 1000 ton/hr |
| Number of Piles: | 1 load |
| Hours of Operation: | 2000 hr/yr |

PM Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.0084 lb/ton (AP-42, Table 8.23-4, moisture content > 4% by weight, 08/82) | |
| Control Efficiency | 50% (Water Spray) | |
| Calculations: | 0.0084 lb/ton * 1000 ton/hr * 1 load = | 8.40 lb/hr |
| | 8.40 lb/hr * 2000 hr/yr * 0.0005 ton/lb = | 8.40 ton/yr |
| | 8.40 ton/yr * 50% control = | 4.20 ton/yr |

$PM_{10}$ Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.004 lb/ton (AP-42, Table 8.23-4, moisture content > 4% by weight, 08/82) | |
| Control Efficiency | 50% (Water Spray) | |
| Calculations: | 0.004 lb/ton * 1000 ton/hr * 2 piles = | 4.00 lb/hr |
| | 4.00 lb/hr * 2000 hr/yr * 0.0005 ton/lb = | 4.00 ton/yr |
| | 4.00 ton/yr * 50% control = | 2.00 ton/yr |

Diesel Generator (1250 kW)

| | |
|---|---|
| Generator Output: | 1250 kW |
| Conversion: | 1250 kW * 1.341 hp/Kw = 1676.25 hp |
| Hours of Operation: | 3000 hr/yr |

PM Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.0022 lb/hp-hr (AP-42, Table 3.3-1, 10/96) | |
| Calculations: | 0.0022 lb/hp-hr * 1676.25 hp = | 3.69 lb/hr |
| | 3.69 lb/hr * 3000 hr/yr * 0.0005 ton/lb = | 5.53 ton/yr |

$PM_{10}$ Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.0022 lb/hp-hr (AP-42, Table 3.3-1, 10/96) | |
| Calculations: | 0.0022 lb/hp-hr * 1676.25 hp = | 3.69 lb/hr |
| | 3.69 lb/hr * 3000 hr/yr * 0.0005 ton/lb = | 5.53 ton/yr |

$NO_x$ Emissions

| | |
|---|---|
| Emission Factor: | 0.031 lb/hp-hr (AP-42, Table 3.3-1, 10/96) |

| | | |
|---|---|---|
| Calculations: | 0.031 lb/hp-hr * 1676.25 hp = | 51.96 lb/hr |
| | 51.96 lb/hr * 3000 hr/yr * 0.0005 ton/lb = | 77.95 ton/yr |

CO Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.00668 lb/hp-hr (AP-42, Table 3.3-1, 10/96) | |
| Calculations: | 0.00668 lb/hp-hr * 1676.25 hp = | 11.20 lb/hr |
| | 11.20 lb/hr * 3000 hr/yr * 0.0005 ton/lb = | 16.80 ton/yr |

$SO_x$ Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.00205 lb/hp-hr (AP-42, Table 3.3-1, 10/96) | |
| Calculations: | 0.00205 lb/hp-hr * 1676.25 hp = | 3.44 lb/hr |
| | 3.44 lb/hr * 3000 hr/yr * 0.0005 ton/lb = | 5.15 ton/yr |

VOC Emissions

| | | |
|---|---|---|
| Emission Factor: | 0.00247 lb/hp-hr (AP-42, Table 3.3-1, 10/96) | |
| Calculations: | 0.00247 lb/hp-hr * 1676.25 hp = | 4.14 lb/hr |
| | 4.14 lb/hr * 3000 hr/yr * 0.0005 ton/lb = | 6.21 ton/yr |

## IV. BACT Determination

A BACT determination is required for any new or altered source. United shall install on the new or altered source the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. Under the current permit action, United added a cone crusher (1000 tph), a material screen (1000 tph), and various material handling conveyors. Therefore, a BACT analysis was conducted for the pollutants of concern for the proposed project: PM and $PM_{10}$.

All visible emissions from the portable crusher added under the current permit action shall be limited to 15% opacity. All visible emissions from the material screen and any other affected equipment manufactured after August 31, 1983, and added to operations under the current permit action are limited to 10% opacity. Further, United must use reasonable precautions to limit the fugitive emission of airborne particulate matter on haul roads, access roads, parking areas, and general plant property. United shall use water spray bars and/or chemical dust suppressant, as necessary, to maintain compliance with the opacity and reasonable precautions limitations. The Department determined that using water spray bars and/or chemical dust suppressant to maintain compliance with the opacity requirements and reasonable precautions limitations constitutes BACT for these sources.

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.

## V. Existing Air Quality and Air Quality Impacts

Permit #2941-02 is issued to United for the operation of a portable crushing/screening operation. Permit #2941-02 will regulate the United facility while operating at any location within the state of Montana, excluding those areas that have a Department approved permitting program, areas considered tribal lands, or areas in or within 10 kilometers (km) of certain $PM_{10}$ nonattainment areas. A Missoula County air quality permit will be required for locations within Missoula County, Montana. An addendum to

Permit #2941-02 will be required for operations located in or within 10 km of certain $PM_{10}$ nonattainment areas. In the view of the Department, the amount of controlled particulate emissions generated by the proposed project will result in similar impacts to those resulting from pre-project emissions and will not cause concentrations of $PM_{10}$ in the ambient air that exceed any set standard. In addition, this source is portable and any air quality impacts will be minimized by the generally short duration of operation in any given area.

VI. Taking or Damaging Implication Analysis

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

VII. Environmental Assessment

An environmental assessment, as 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, Montana 59620
(406) 444-3490

FINAL ENVIRONMENTAL ASSESSMENT (EA)

*Issued For*: United Materials of Great Falls, Inc.
P.O. Box 1690
Great Falls, MT 59403-1690

*Air Quality Permit Number*: #2941-02

*Preliminary Determination Issued*: November 14, 2005
*Department Decision Issued*: December 15, 2005
*Permit Final*: December 31, 2005

1. *Legal Description of Site*: Permit #2941-02 would apply while operating in any location in the state of Montana, except within those areas having a Department approved permitting program, areas considered tribal lands, or areas in or within 10 km of certain $PM_{10}$ nonattainment areas. A Missoula County air quality permit will be required for locations within Missoula County, Montana. An addendum to Permit #2941-02 will be required for operations located in or within 10 km of certain $PM_{10}$ nonattainment areas.

2. *Description of Project*: On November 3, 2005, United submitted a complete permit application to modify plant operations. Specifically, the current permit action would add a Nordberg 6' x 20' 3-deck screen (1000 ton per hour (tph)), a Nordberg HP300 cone crusher (1000 tph), and various material handling conveyors to the previously permitted operation. In addition, the current permit action would remove an existing Nordberg HP200 cone crusher (1000 tph) from permitted operations.

   Further, potential uncontrolled emissions from modified United operations would exceed the applicable major source Title V Operating Permit program threshold. However, in an effort to avoid Title V Operating Permit program applicability, United proposed a synthetic-minor (SM) limit on facility operations. After consultation with the Department, United proposed an enforceable plant-wide production limit of 2,000,000 tons during any rolling 12-month time period. Limiting production to a maximum of 2,000,000 tons per year would result in allowable plant-wide emissions at a level less than 80% of the applicable Title V operating permit program emission threshold and would thereby allow United to avoid Title V SM-80 regulatory status.

3. *Objectives of Project*: United desires to increase business and revenue for the company. This objective could be met through operating the additional crushing/screening equipment to generate aggregate for sale and use.

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 United 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 permit and a permit analysis, including a BACT analysis, would be contained in Permit #2941-02.

6. *Regulatory Effects on Private Property Rights*: 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.

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

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

A. Terrestrial and Aquatic Life and Habitats

Terrestrials would use the same areas that the crushing/screening operations would occupy; therefore, the operations would impact this resource. However, addition of the proposed new crushing/screening equipment to existing crushing/screening operations would result in only minor and typical additional impacts to terrestrial life in the area.

B. Water Quality, Quantity, and Distribution

Water would be required for dust suppression on the proposed new crushing/screening equipment, but would cause only minor additional disturbances to the area because only relatively small amounts of water would be needed and because existing permitted operations already use water for pollution control practices. No additional surface water or ground water quality impacts would be expected as a result of using water for dust suppression, or from other accidental spills or equipment leaks. Overall, any impacts to water quality, quantity, and distribution would be minor and typical.

C. Geology and Soil Quality, Stability, and Moisture

The soils in any given affected area would be impacted by the addition of the proposed crushing/screening equipment due to the nature of the proposed new equipment. However, given that United operations would typically take place within a previously disturbed open-cut pit, and existing crushing/screening equipment already results in similar impacts, any potential impacts would be minor and typical.

D. Vegetation Cover, Quantity, and Quality

Existing vegetative cover, quantity, and quality would be impacted by the emissions from the proposed new crushing/screening equipment because the new equipment would result in additional processing of materials. However, given that United operations would typically take place within a previously disturbed open-cut pit, and existing crushing/screening equipment already results in similar impacts, any potential impacts would be minor and typical.

E. Aesthetics

The proposed new crushing/screening equipment would be visible and would create additional noise in the area. However, Permit #2941-02 would include conditions to control emissions, including visible emissions, from the proposed new equipment. The addition of the proposed new crushing/screening equipment to existing crushing/ screening operations would result in only minor and typical additional impacts to any aesthetic resource in a given area of operations.

F. Air Quality

The air quality impacts from the proposed new crushing/screening equipment would be minor because Permit #2941-02 would include conditions limiting the opacity from the affected equipment, as well as requiring water spray bars and other means to control air pollution. Further, any additional impacts from the proposed new equipment would be limited by BACT determined control requirements for the specific affected equipment and production limits placed on total plant operations. Overall, any additional air quality impacts realized by the addition of the proposed new crushing/screening equipment would be minor and typical.

G. Unique Endangered, Fragile, or Limited Environmental Resources

Addition of the proposed new crushing/screening equipment would result in only minor impacts to any unique endangered, fragile, or limited environmental resources that would be located in any given area of operation because the additional equipment would result in additional emissions and other minor impacts discussed in previous sections of this EA. Overall, any additional impacts realized by the addition of the proposed new crushing/screening equipment would be minor and typical.

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

The new proposed crushing/screening equipment would result in only a minor increased demand for water, air and energy resources given that the proposed operations would require only small additional quantities of water, air, and energy for conditional operation. Small quantities of water would be used for dust suppression activities associated with the new crushing/screening equipment. Further, addition of the new equipment would result in a minor increase in energy requirements from the existing and previously permitted diesel generator. Air resources would also realize minor impacts associated with a minor increase in allowable air emissions of regulated pollutants. Overall, any additional impacts realized by the addition of the proposed new crushing/screening equipment would be minor and typical.

I. Historical and Archaeological Sites

The proposed new crushing/screening equipment and the existing and previously permitted crushing/screening plant would typically operate within a previously disturbed and permitted open cut pit. According to the State Historical Preservation Office (SHPO), given previous industrial disturbance to a given area, there would be a low likelihood of disturbance to any archaeological or historical site. Therefore, addition of the proposed crushing/screening equipment to plant operations would not impact any historical or archaeological site.

J. Cumulative and Secondary Impacts

Overall, cumulative and secondary impacts from the proposed project on the physical and biological resources of the human environment in the immediate area of proposed crushing/screening operations would be minor because the predominant use of the surrounding area would not change as a result of the proposed project. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as would be outlined in Permit #2941-02.

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

| Potential Social and Economic Effects | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | 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 SOCIAL AND ECONOMIC EFFECTS**:
The following comments have been prepared by the Department.

A. Social Structures and Mores
B. Cultural Uniqueness and Diversity

The proposed project would not impact the social structures and mores or the cultural uniqueness and diversity of the proposed area of operation because the project would include adding equipment to the permitted plant to facilitate operations similar to existing operations at the facility. The predominant use of any given area of operation would not change as a result of the proposed project; therefore, no impacts to the above-cited resources would be expected as a result of the current permit action.

C. Local and State Tax Base and Tax Revenue

The proposed project would result in only a minor impact on any given local and the state tax base and tax revenue because the project would only slightly change current practices. Any economic impact to a given area would be minor because the proposed project would not change typical operations. Further, the project would require only a limited amount of new construction and only a limited number of existing employees/operators and likely no new employees would be required for normal operations of the proposed equipment. Overall, any impact to local and state tax base and tax revenue would be minor as a result of the installation and operation of the proposed new equipment at the facility.

D. Agricultural or Industrial Production

The proposed project would not impact or displace any land used for agricultural production because the proposed project would typically operate within an existing open cut pit. Further, the proposed project would result in only a minor amount of additional, but similar, industrial production through operation of the new equipment. Otherwise, the current permit action would not alter the general nature of industrial activities at any given site.

E. Human Health

Permit #2941-02 would incorporate conditions to ensure that the proposed new crushing/screening equipment would operate in compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health. Therefore, only minor impacts would be expected on human health from the proposed project.

F. Access to and Quality of Recreational and Wilderness Activities

The proposed project would add and remove equipment at the facility but would not impact any access to or quality of any recreation or wilderness activities in any given area because the proposed project would typically operate within an existing open cut pit, which normally accommodates operations of this kind. Therefore, no additional impacts to the access and quality of recreational and wilderness activities would be realized as a result of the current permit action.

G. Quantity and Distribution of Employment
H. Distribution of Population

The installation and operation of the proposed new equipment would utilize existing United personnel for operations and would likely not require any new or only a limited amount of new employment. Therefore, the proposed project would have little or no impact on the quantity and distribution of employment and population in the area.

I. Demands of Government Services

Government services would be required for acquiring the appropriate permits from government agencies. In addition, the permitted source of emissions would be subject to periodic inspections by government personnel. Overall, demands for government services would be minor.

J. Industrial and Commercial Activity

The proposed project would result in only minor impact on local industrial and commercial activity because the proposed project would be similar to existing activity and would typically operate within an existing industrial open cut pit. Further, the proposed project would require only a small amount of new construction and would not result in additional industrial production. Overall, any potential impact to the industrial and commercial activity in a given area of operation would be minor.

K. Locally Adopted Environmental Plans and Goals

The crushing/screening plant would operate in various locations throughout the state;

therefore, the Department is unaware of any locally adopted environmental plans or goals that may be affected by the proposed project. The state standards included in the air quality permit would be protective of any proposed project area.

L. Cumulative and Secondary Impacts

Overall, cumulative and secondary impacts from the proposed project on the economic and social resources of the human environment in the immediate area would be minor because the predominant use of the surrounding area would not change as a result of the proposed project. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as would be outlined in Permit #2941-02.

Recommendation: No EIS is required.

*If an EIS is not required, explain why the EA is an appropriate level of analysis*: Since this plant is a relatively small source and the impacts from the plant will be minor, an EIS is not necessary.

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

*Individuals or groups contributing to this EA:* Department of Environmental Quality – Permitting and Compliance Division (Air Resources Management Bureau and Industrial and Energy Minerals Bureau), Montana Natural Heritage Program, State Historic Preservation Office (Montana Historical Society).

EA prepared by: M. Eric Merchant, MPH
Date: November 2, 2005