

## AIR QUALITY PERMIT

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

Permit #2941-01  
Application Complete: 8/22/01  
Preliminary Determination Issued: 9/25/01  
Department Decision Issued: 10/11/01  
Permit Final: 10/27/01  
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. United is initially locating in Section 7, Township 20 North, Range 3 East, in Cascade County, Montana. Permit #2941-01 applies while operating in any location within the State of Montana, except within those areas having a Department of Environmental Quality (Department) approved permitting program. *A Missoula County air quality permit will be required for locations within Missoula County.* A list of the permitted equipment is contained in Section I.A of the permit analysis.
- B. Current Permit Action: 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. The permit was also updated to reflect the current format for writing permits. A complete list of the permitted equipment is located in the permit analysis.

### Section II: Limitations and Conditions

- A. Emission Limitations
  - 1. All visible emissions from the 1996 Nordberg Cone Crusher, the 1997 Nordberg Cone Crusher, and the 1998 Nordberg Cone Crusher may not exhibit an opacity of 15% or greater averaged over 6 consecutive minutes (ARM 17.8.340, ARM 17.8.715, and 40 CFR, Subpart OOO).
  - 2. United shall not cause or authorize to be discharged into the atmosphere

from the two 2000 Deister Screens and any other affected equipment manufactured after August 31, 1983, any visible emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.340, ARM 17.8.715, 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 6 consecutive minutes (ARM 17.8.304 and ARM 17.8.715).
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 6 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 17.8.710).
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 17.8.715).
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 17.8.710).
8. United shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR Part 60, Subpart OOO for the crushing/screening plant (ARM 17.8.340 and 40 CFR 60, Subpart OOO).
9. Total plant production shall be limited to 225,000 tons during any rolling 12-month time period (ARM 17.8.710).
10. Operation of the 1250 KW diesel generator shall not exceed 4940 hours during any rolling 12-month time period (ARM 17.8.710).

#### 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 1996 Nordberg Cone Crusher, the 1997 Nordberg Cone Crusher, the 1998 Nordberg Cone Crusher, the two 2000 Deister Screens,

and all other affected equipment as described in 40 CFR 60, Subpart OOO to demonstrate compliance with the emission limitations contained in Sections II.A.1 and II.A.2 (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 5 years following the date of the measurement, shall be submitted to the Department upon request, and shall be available at the plant site for inspection by the Department (ARM 17.8.710).
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 17.8.705(1)(r), that would include a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation, or the addition of a new emission unit. The notice must be submitted to the Department, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.705(1)(r)(iv) (ARM

17.8.705).

5. United shall document, by month, the production of the crushing/screening facility. By the 25<sup>th</sup> of each month, United shall total the monthly throughput of the crushing facility during the previous 12 months to verify compliance with the limitations in Section II.A.9. A written report of the compliance verification shall be submitted along with the annual emissions inventory (ARM 17.8.710).
6. United shall document, by month, the total hours of operation for the 1250 KW diesel generator. By the 25<sup>th</sup> of each month, United shall total the hours of operation for the diesel generator during the previous 12 months to verify compliance with the limitation in Section II.A.10. A written report of the compliance verification shall be submitted along with the annual emissions inventory (ARM 17.8.710).
7. 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 the certification requirements of ARM 17.8.1207. The annual certification shall be submitted with the annual emissions inventory information.

### Section III: General Conditions

- A. Inspection - The recipient shall allow the Department 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 the recipient fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations - Nothing in this permit shall be construed as relieving the permittee of the responsibility for complying with any applicable federal or Montana statute, rule or standard, except as specifically provided in ARM 17.8.701, *et seq.* (ARM 17.8.717).
- 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 who are 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 Department's decision on the application is not final unless 15 days have elapsed and there is no

request for a hearing under this section. The filing of a request for a hearing postpones the effective date of the Department's decision until the conclusion of the hearing and issuance of a final decision by the Board.

- F. Permit Inspection - As required by ARM 17.8.716, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by Department personnel at the location of the permitted source.
- G. Construction Commencement - Construction must begin within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked.
- H. Permit Fees - Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, the continuing validity of this permit is conditional upon the payment by the permittee, of an annual operation fee, as required, by that Section and rules adopted thereunder by the Board.
- I. The Department may modify the conditions of this permit based on local conditions of any future site. These factors may include, but are not limited to, local terrain, meteorological conditions, proximity to residences, etc.
- J. United shall comply with the conditions contained in this permit while operating at any location in the State of Montana, except within those areas having a Department-approved permitting program.

PERMIT ANALYSIS  
United Materials of Great Falls, Inc.  
Permit #2941-01

I. Introduction/Process Description

A. Permitted Equipment

United Materials of Great Falls, Inc. (United) operates 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 diesel KW generator, and associated equipment.

B. Process Description

United Material proposes to use this crusher 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, the secondary screen, or stockpiled. Materials from the primary cone crusher are crushed and sent onto the secondary screen. From that point, the materials are sent onto the secondary and tertiary cone crushers and recycled back through the secondary screen 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.

D. Current Permit Action

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. A complete list of the permitted equipment is located in the permit analysis. Permit #2941-01 replaces Permit #2941-00.

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 4 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, the portable 1996 Nordberg Cone Crusher, the 1997 Nordberg Cone Crusher, the 1998 Nordberg Cone Crusher, and two 2000 Deister Screens are NSPS (40 CFR Part 60, Subpart A, General Provisions and Subpart OOO, Non-Metallic Mineral Processing Plants) affected sources.

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 prorate the required fee amount.

- E. ARM 17.8, Sub-Chapter 7, Permit, Construction and Operation of Air Contaminant Sources, including, but not limited to:
1. ARM 17.8.704 General Procedures for Air Quality Preconstruction Permitting. An air quality preconstruction permit shall contain requirements and conditions applicable to both construction and subsequent use of the permitted equipment.
  2. ARM 17.8.705 When Permit Required--Exclusions. Permits are required for crushing/screening plants that have the potential to emit greater than 5 tons per year of any pollutant. United has the potential to emit more than 5 tons per year of particulate matter, PM-10, NO<sub>x</sub>, CO, and SO<sub>x</sub>; therefore, a permit is required.
  3. ARM 17.8.706 New or Altered Sources and Stacks--Permit Application Requirements. This rule requires that an application for an air quality permit be submitted for a new or altered source or stack. United submitted the appropriate permit application for the current permitting action.
  4. ARM 17.8.710 Conditions for Issuance of Permit. This rule requires that the source demonstrate compliance with applicable rules and standards before a permit can be issued. Also, a permit may be issued with such conditions as are necessary to assure compliance with all applicable rules and standards. United demonstrated compliance with applicable rules and standards as required for permit issuance.
  5. ARM 17.8.715 Emission Control Requirements. United is required to install on a new or altered source the maximum air pollution controls capability that is technically practicable and economically feasible except BACT shall be utilized. The required BACT analysis is included in Section IV of this permit analysis.
  6. ARM 17.8.716 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.

7. ARM 17.8.717 Compliance with Other Statutes and Rules. 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 17.8.701, *et seq.*
  8. ARM 17.8.720 Public Review of Permit Applications. This rule requires that United notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. As proof of publication, United submitted an affidavit of publication of public notice from the September 4, 2001, issue of the Great Falls Tribune, a newspaper of general circulation in Cascade County, Montana.
  9. ARM 17.8.731 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this sub-chapter, 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, that in no event may be less than 1 year after the permit is issued.
  10. ARM 17.8.733 Modification of Permit. An air quality permit may be modified for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase in emissions because of the changed conditions. A source may not increase its emissions beyond those found in its permit unless the source applies for and receives another permit.
  11. ARM 17.8.734 Transfer of Permit. (1) An air quality permit may be transferred from one location to another if written notice of Intent to Transfer is sent to the Department. (2) An air quality permit may be transferred from one person to another if a written notice of Intent to Transfer, including the names of the transferor and 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 potential to emit 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. Potential To Emit (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 #2941-01 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.

United is not subject to Title V Operating Permit requirements because federally enforceable limitations have been established that limit the source's potential to emit below the major source threshold. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit, United will be required to obtain an Operating Permit.

### III. Emission Inventory

|-----|  
Ton/Year

Source	PM	PM-10	NO <sub>x</sub>	VOC	CO	SO <sub>x</sub>
1996 Nordberg Cone Crusher (1000 TPH)	2.46	1.18				
1997 Nordberg Cone Crusher (1000 TPH)	2.46	1.18				
1998 Nordberg Cone Crusher (1000 TPH)	2.46	1.18				
2000 Deister 7'x20' Screen (1000 TPH)	15.52	7.39				
2000 Deister 8'x20' Screen (1000 TPH)	15.52	7.39				
Material Transfer	47.16	22.77				
Pile Forming	4.14	1.97				
Bulk Loading	4.14	1.97				
Diesel Generator (1250 KW)	2.90	2.90	99.37	2.65	22.77	8.36
Haul Roads	2.74	1.23				
Total	99.50	49.16	99.37	2.65	22.77	8.36

#### 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. A BACT analysis was conducted for particulate, NO<sub>x</sub>, and CO.

All visible emissions from the portable 1996 Nordberg Cone Crusher (maximum capacity 1000 TPH), the 1997 Nordberg Cone Crusher (maximum capacity 1000 TPH), and the 1998 Nordberg Cone Crusher (maximum capacity 1000 TPH) are limited to 15% opacity. All visible emissions from the two 2000 Deister Screens (maximum capacity 1000 TPH), and any other affected equipment manufactured after August 31, 1983, are limited to 10% opacity. Also, all visible emissions from any other associated are limited to 20% opacity. Further, United must take reasonable precautions to limit the fugitive emissions of airborne particulate matter on haul roads, access roads, parking areas, and general plant property. United shall use water spray bars and dust suppressant, as necessary, to maintain compliance with the opacity and reasonable precautions limitations. The Department determined that using water spray bars and dust suppressant to maintain compliance with the opacity requirements and reasonable precautions limitations constitutes BACT for these sources.

A BACT analysis was also conducted for the diesel generator NO<sub>x</sub> and CO emissions. The Department determined that add-on controls for NO<sub>x</sub> and CO were not economically feasible because the emissions of NO<sub>x</sub> and CO will be relatively low. Furthermore, limitations were placed in Permit #2941-01 that further reduce the emissions of NO<sub>x</sub> and CO.

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

#### V. Existing Air Quality and Impacts

Permit #2941-01 is issued to United for the operation of a portable crushing/screening operation, originally located in Section 7, Township 20 North, Range 3 East, in Cascade County, Montana. Permit #2941-01 will cover the United facility while operating at any location within the State of Montana, excluding those counties that have a Department approved permitting program. In the view of the Department, the amount of controlled particulate emissions generated by this project will not cause concentrations of PM-10 in the ambient air that exceed the set standard. In addition, this source is portable and any air quality impacts will be minimal.

#### 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 and Waste 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:* #2941-01

*Preliminary Determination Issued:* September 25, 2001

*Department Decision Issued:* October 11, 2001

*Permit Final:* October 27, 2001

1. *Legal Description of Site:* United submitted a complete permit application to operate a portable crushing/screening operation. The facility would initially locate in Section 7, Township 20 North, Range 3 East, in Cascade County, Montana. In addition, Permit #2941-01 would apply while operating in any location in the State of Montana, except within those areas having a Department approved permitting program. A *Missoula County air quality permit would be required for locations within Missoula County.*
2. *Description of Project:* The permit application submitted by United is for the construction and operation of a portable crushing/screening plant that consists of a portable 1996 Nordberg Cone Crusher, a 1997 Nordberg Cone Crusher, a 1998 Nordberg Cone Crusher, two 2000 Deister Screens, a 1250 KW diesel generator, and associated equipment. A summary of the process description is discussed in Section I.B of the permit analysis for Permit #2941-01.
3. *Objectives of Project:* United desires to increase business and revenue for the company. This objective could be met through operating the crushing/screening facility, and thereby 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 #2941-01.
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			4			yes
B	Water Quality, Quantity, and Distribution			4			yes
C	Geology and Soil Quality, Stability, and Moisture			4			yes
D	Vegetation Cover, Quantity, and Quality			4			yes
E	Aesthetics			4			yes
F	Air Quality			4			yes
G	Unique Endangered, Fragile, or Limited Environmental Resource				4		yes
H	Demands on Environmental Resource of Water, Air, and Energy			4			yes
I	Historical and Archaeological Sites				4		yes
J	Cumulative and Secondary Impacts			4			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 occupy. However, the crushing/screening operations alone would present only minor impacts upon terrestrial life in the area because of the temporary nature of the operation. Also, the area in question is an existing gravel pit that is permitted through the Industrial and Energy Minerals Bureau (IEMB), so no new impacts upon terrestrial and aquatic life are expected.

**B. Water Quality, Quantity, and Distribution**

Water would be required for dust suppression, but would only cause a minor disturbance to the area because only relatively small amounts of water would be needed. No additional surface water or ground water quality impacts are expected as a result of using water for dust suppression, or from other accidental spills or equipment leaks.

**C. Geology and Soil Quality, Stability, and Moisture**

The soils in the affected area would be impacted by the crushing/screening operations due to the construction and use of the crushing/screening facility. However, given the relatively small size and portable nature of the operation and the fact that operations would take place within a previously disturbed quarry, any potential impacts would be minor.

#### D. Vegetation Cover, Quantity, and Quality

The existing vegetative cover would be impacted by the emissions from the crushing/screening facility. However, any impacts would be minor because the proposed operations would locate in a previously disturbed gravel pit and the source is a small and temporary operation. Also, much of the soil has been previously stripped in the surrounding area, and the site is an old existing prelaw pit. Therefore, any disturbances to the soils would be minor.

#### E. Aesthetics

The crushing/screening operations would be visible and would create additional noise in the area. Permit #2941-01 would include conditions to control emissions, including visible emissions, from the plant. Since the crushing/screening operations are a small portable source, and would be located within an existing pit, any visual aesthetic and noise impacts would be minor.

#### F. Air Quality

The air quality impacts from the crushing/screening operations would be minor because Permit #2941-01 would include conditions limiting the opacity from the plant, as well as requiring water spray bars and other means to control air pollution. The operations would be limited by Permit #2941-01 to total particulate emissions of 250 ton/year or less from non-fugitive sources at the plant, in addition to any additional equipment used at the site. Additional limitations on plant production and hours of generator operations would be placed on the facility.

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

The proposed project would have no impact on any unique endangered, fragile, or limited environmental resources because no such resources have been identified in the area. The Department contacted the Montana Natural Heritage Program (MNHP) in an effort to identify any species of special concern that may be found in the proposed initial area of the operation. Search results have concluded that there are no such environmental resources in the area. Area, in this case, was defined by the township and range of the proposed site, with an additional 1-mile buffer.

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

The crushing/screening operations would only require small quantities of water, air, and energy for proper operating, due to the size of the facility. Small quantities of water would be used for dust suppression and would control emission being generated at the site. Energy requirements would also be small, as the facility is a small crushing/screening operation powered by a diesel generator. Air resources and subsequent impacts would also be minor because the source is a small and temporary source with dispersion taking place within a relatively large, disturbed industrial gravel pit. Generally, the operations are seasonal, and would result in smaller demands on the environmental resources. Any impacts would be minor.

I. Historical and Archaeological Sites

The crushing/screening operations would initially take place within a previously disturbed, permitted open cut pit. According to the State Historical Preservation Office, given the previous disturbance in the area, there would be a low likelihood of disturbance to any archaeological or historical site. Therefore, the crushing/screening operations would not have an effect on any historical or archaeological site. The proposed site has been used by United in the past, as well as by numerous other similar facilities.

J. Cumulative and Secondary Impacts

The crushing/screening operations would cause minor cumulative and secondary affects to the physical and biological environment in the immediate area because the plant would generate emissions of particulate matter, PM-10, NO<sub>x</sub>, VOC, CO, and SO<sub>x</sub>. Noise impacts will also be minor and muffled by operating within a hillside gravel pit. There is a potential for other operations to locate at this site. However, any operations would have to apply for and receive the appropriate permits from the Department prior to operation. 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 #2941-01.

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				4		yes
B	Cultural Uniqueness and Diversity				4		yes
C	Local and State Tax Base and Tax Revenue			4			yes
D	Agricultural or Industrial Production			4			yes
E	Human Health			4			yes
F	Access to and Quality of Recreational and Wilderness Activities			4			yes
G	Quantity and Distribution of Employment			4			yes
H	Distribution of Population				4		yes
I	Demands for Government Services			4			yes
J	Industrial and Commercial Activity			4			yes
K	Locally Adopted Environmental Plans and Goals				4		yes
L	Cumulative and Secondary Impacts			4			yes

## **SUMMARY OF COMMENTS ON POTENTIAL SOCIAL AND ECONOMIC EFFECTS:**

The following comments have been prepared by the Department.

### **A. Social Structures and Mores**

The crushing/screening operation would not have an impact on social structures and mores because it is a relatively small source to be located in an existing rock quarry along an existing hillside. This area has multiple previously developed gravel pit sites, is immediately adjacent to a rural roadway running parallel to the hillside gravel pits, with no native American or traditional communities near the existing site.

### **B. Cultural Uniqueness and Diversity**

The crushing/screening operations would not have an impact on the cultural uniqueness and diversity on the proposed area of operation because the source is small and temporary and would be operating in a permitted open cut pit. The proposed site has been used for asphalt operations, crushing/screening operations, and a concrete batch plant. The site area will continue to be used for such operations and is being expanded to connect the existing gravel pits together.

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

The proposed crushing/screening operations would have little, if any, effect on local and state tax base and tax revenue because it is a small source by industrial standards. This facility would only need 6 employees to operate, so only minor impacts to the local and state tax base and revenue could be expected.

### **D. Agricultural or Industrial Production**

The crushing/screening facility would locate in a previously disturbed industrial area. Because the facility would operate within a permitted open cut pit, upon completion of the operations, the area would be reclaimed, as specified, by the IEMB. Minor and temporary affects may occur to agricultural land, but the IEMB would be responsible for oversight of any reclamation activities. Further, the crushing/screening operations are small by industrial standards and, thus, would have only a minor impact on local industrial production.

### **E. Human Health**

Permit #2941-01 would incorporate conditions to ensure that the crushing/screening operations would be operated in compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health. Since these conditions would be incorporated, only minor impacts would be expected from this crushing/screening facility.

### **F. Access to and Quality of Recreational and Wilderness Activities**

The crushing/screening operations would not affect any access to recreational and wilderness activities because of the layout of the nearby roadway and the numerous gravel pit sites within the area. However, minor affects to the quality of recreational activities might be created by the noise from the site.

G. Quantity and Distribution of Employment

The activities from the crushing/screening operations would only have a minor affect the quantity employment in the area, because only 6 employees would be used for the operations. Because the operations would be small and temporary, no affects to the distribution of employment are expected.

H. Distribution of Population

The activities from the crushing/screening operations would not disrupt the normal population distribution in the area because of the size and temporary nature of the operations. Only 6 employees would be used to operate the facility, so no affects upon population distribution is expected.

I. Demands of Government Services

Minor increases would result on the traffic on existing roads in the area while the crushing/screening operations are in progress. 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 is 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. The state standards would protect the proposed site and the environment surrounding the site.

L. Cumulative and Secondary Impacts

The crushing/screening operations would cause minor cumulative and secondary impacts to the social and economic environment in the immediate area. Operations of the portable, temporary source, would cause minor increases in traffic in the immediate area. Because the source is a relatively small, temporary source, only minor economic impacts to the local economy could be expected from the operations of the facility. 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 #2941-01.

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 and Waste 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 and Waste Management Bureau and Industrial and Energy Minerals Bureau), Montana Natural Heritage Program, State Historic Preservation Office (Montana Historical Society).

EA prepared by: Ron Lowney

Date: September 6, 2001