

## AIR QUALITY PERMIT

Issued To: Zaco, Inc.  
1143 Franklin Avenue  
Great Falls, Montana 59405

Permit #3269-00  
Application Complete: 07/08/03  
Preliminary Determination Issued: 07/22/03  
Department Decision Issued: 08/07/03  
Permit Final: 08/23/03  
AFS #777-3269

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

### Section I: Permitted Facilities

#### A. Permitted Equipment

Zaco operates a portable crushing/screening facility. A complete list of the permitted equipment is contained in Section I.A of the permit analysis.

#### B. Plant Location

Zaco operates a portable crushing/screening facility that will initially locate in Section 18, Township 22 North, Range 5 East, in Cascade County, Montana. However, Permit #3269-00 applies while operating at any location in Montana, except within those areas having a Department of Environmental Quality (Department) approved permitting program, tribal lands, or those areas in or within 10 kilometers (km) of certain PM<sub>10</sub> nonattainment areas. An addendum to this air quality permit will be required if Zaco intends to locate in or within 10 kilometers (km) of certain PM<sub>10</sub> nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.*

### Section II: Conditions and Limitations

#### A. Emission Limitations

1. Zaco shall not cause or authorize to be discharged into the atmosphere, from any non-NSPS affected equipment, any visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304 and ARM 17.8.752).
2. Water and water spray bars shall be available on site at all times and used, as necessary, to maintain compliance with the opacity limitations in Section II.A.1 (ARM 17.8.752).
3. Zaco shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308 and ARM 17.8.752).
4. Zaco 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.3 (ARM 17.8.752).

5. Zaco shall not operate more than one crusher at any given time and the maximum rated design capacity shall not exceed 100 tons per hour (TPH) (ARM 17.8.749).
6. Crusher production from the facility shall be limited to 876,000 tons during any rolling 12-month time period (ARM 17.8.749).
7. Zaco shall not operate more than one screen at any given time and the maximum rated design capacity shall not exceed 100 TPH (ARM 17.8.749).
8. Screen production from the facility shall be limited to 876,000 tons during any rolling 12-month time period (ARM 17.8.749).
9. Zaco shall not operate more than one diesel generator at any given time and the maximum rated design capacity shall not exceed 210 kilowatts (kW) (ARM 17.8.749).
10. If the permitted equipment is used in conjunction with any other equipment owned or operated by Zaco, 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).

B. Testing Requirements

1. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
2. The Department may require testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. If this portable 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 to which the transfer is to be made, at least 15 days prior to the move. The Intent to Transfer Form and the proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.765).
2. Zaco 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 Zaco as a permanent business record for at least 5 years following the date of the measurement, shall be available at the plant site for inspection by the Department, and shall be submitted to the Department upon request (ARM 17.8.749).
3. Zaco 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 most recent 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. This information may be used for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

4. Zaco 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 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 17.8.745(1)(d)(ARM 17.8.745).

5. Zaco shall document, by month, the total crushing production for the facility. By the 25th day of each month, Zaco shall total the crushing production during the previous 12 months to verify compliance with the limitation in Section II.A.6. A written report of the compliance verification shall be submitted along with the annual emission inventory (ARM 17.8.749).
6. Zaco shall document, by month, the total screening production for the facility. By the 25th day of each month, Zaco shall total the screening production during the previous 12 months to verify compliance with the limitation in Section II.A.8. A written report of the compliance verification shall be submitted along with the annual emission inventory (ARM 17.8.749).

### Section III: General Conditions

- A. Inspection – Zaco 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 Zaco fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations - Nothing in this permit shall be construed as relieving Zaco 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.* (ARM 17.8.756).
- D. Enforcement - Violations of limitations, conditions, and requirements contained herein may constitute grounds for permit revocation, penalties, or other enforcement as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals - Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing postpones

the effective date of the Department decision until the conclusion of the hearing and issuance of a final decision by the Board. 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.

- 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. 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, failure to pay by Zaco of an annual operation fee may be grounds for revocation of this permit, 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. Zaco shall comply with the conditions contained in this permit while operating at any location in Montana, except within those areas having a Department approved permitting program.

PERMIT ANALYSIS  
Zaco, Inc.  
Permit Number 3269-00

I. Introduction/Process Description

A. Permitted Equipment

Zaco, Inc. (Zaco) owns and operates a portable crushing/screening facility consisting of a portable Pre-1983 Pioneer jaw crusher (up to 100 tons per hour (TPH)), a 2003 Homemade screen (up to 100 TPH), a diesel generator (up to 210 kilowatts (kW)), and associated equipment. The proposed original location for the facility is in Section 18, Township 22 North, Range 5 East, in Cascade County, Montana. Permit #3269-00 will apply to the source while operating at any location in Montana, except within those areas having a Department of Environmental Quality (Department) approved permitting program, tribal lands, or those areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) nonattainment areas. An addendum to this air quality permit will be required if Zaco intends to locate in or within 10 km of certain PM<sub>10</sub> nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.*

B. Process Description

Zaco proposes to use this crushing/screening plant to crush and sort sand and gravel materials for use in various construction operations. For a typical operational setup, unprocessed materials are loaded into the crushing/screening plant by a hopper and transferred by conveyor to the crushers, where the material is crushed. Materials are crushed and sent to the screens, where they are separated and conveyed to stockpile.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department. 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, Subchapter 1 - General Provisions, including, but not limited to:

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

Zaco 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.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.
5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means which, 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. (2) 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, Subchapter 2 - Ambient Air Quality, including, but not limited to:

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

Zaco must comply with the applicable ambient air quality standards.

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

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, Zaco shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.
3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.
4. ARM 17.8.310 Particulate Matter, Industrial Processes. This rule requires that no person shall cause or allow to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this rule.

6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank truck or trailer is equipped with a vapor loss control device as described in (1) of this rule.
7. ARM 17.8.340 Standards of Performance for New Stationary Sources. This rule incorporates, by reference, 40 CFR 60, Standards of Performance for New Stationary Sources (NSPS). The owner or operator of any stationary source or modification, as defined and applied in 40 CFR Part 60, NSPS, shall comply with the standards and provisions of 40 CFR Part 60.

In order for a crushing/screening plant to be subject to NSPS requirements, two specific criteria must be met. First, the crushing/screening plant must meet the definition of an affected facility and, second, the equipment in question must have been constructed, reconstructed, or modified after August 31, 1983. Based on the information submitted by Zaco, at the time of issuance of Permit #3269-00, the crushing/screening equipment to be used under Permit #3269-00 is not subject to NSPS requirements (40 CFR Part 60, Subpart A General Provisions, and Subpart OOO, Non-Metallic Mineral Processing Plants) because the facility size is below the 150 TPH threshold and the crusher was manufactured before 1983.

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

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that Zaco 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. Zaco submitted the appropriate permit application fee as required 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 facility to obtain an air quality permit or permit alteration if they construct, modify, or use any asphalt plant, crusher, or screen that has the potential to emit greater than 15 tons per year of any pollutant. Zaco has the potential to emit more than 15 tons per year of total particulate matter (PM) and oxides of nitrogen (NO<sub>x</sub>); therefore, an air quality permit is required.
3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit Program.
4. ARM 17.8.745 Montana Air Quality Permits—Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that are not subject to the Montana Air Quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. This rule requires that a permit application be submitted prior to installation, modification, or use of a source. Zaco 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. Zaco submitted an affidavit of publication of public notice for the June 25, 2003, 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 Best Available Control Technology (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 Zaco 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 those found in its permit, 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, 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, including a Transfer of Location notice and an affidavit of publication from a newspaper of general circulation in the area to be affected. (2) This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

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

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

This facility is not a major stationary source since it is not a listed source and the facility's potential to emit (PTE) is less 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 > 100 tons/year of any pollutant;

- b. PTE > 10 tons/year of any one Hazardous Air Pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or a lesser quantity as the Department may establish by rule; or
  - c. PTE > 70 tons/year of PM<sub>10</sub> in a serious PM<sub>10</sub> nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (1) Title V of the FCAA Amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #3269-00 for the Zaco facility, the following conclusions were made:
- a. The facility's permitted PTE is less than 100 tons/year for any pollutant.
  - b. The facility's PTE is less than 10 tons/year of any one HAP and less than 25 tons/year of all HAPs.
  - c. This source is not located in a serious PM<sub>10</sub> nonattainment area.
  - d. This facility is not subject to any current NESHAP standards.
  - e. This facility is not subject to current NSPS standards.
  - f. This source is not a Title IV affected source nor a solid waste combustion unit.
  - g. This source is not an EPA designated Title V source.

Based on these facts, the Department determined that Zaco will be a minor source of emissions as defined under Title V.

### III. Emission Inventory

Source	Tons/Year					
	PM	PM <sub>10</sub>	NO <sub>x</sub>	VOC	CO	SO <sub>x</sub>
Pre- 1983 Pioneer Jaw Crusher (up to 100 TPH)	1.10	0.53				
2003 Homemade screen (up to 100 TPH)	6.90	3.29				
Material Transfer	5.72	2.76				
Pile Forming	5.52	2.63				
Bulk Loading	1.84	0.88				
Diesel Generator (up to 210 kW)	2.71	2.71	38.24	3.05	8.24	2.53
Haul Roads	2.74	1.23				
<b>Total</b>	<b>26.53</b>	<b>14.03</b>	<b>38.24</b>	<b>3.05</b>	<b>8.24</b>	<b>2.53</b>

- A complete emission inventory for Permit #3269-00 is on file with the Department.

### IV. BACT Determination

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

Zaco shall not cause to be discharged into the atmosphere from any non-NSPS affected equipment any visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes. Zaco must also take reasonable precautions to limit the fugitive emissions of airborne particulate matter from haul roads, access roads, parking areas, and the general area of operation. Zaco is required to use water spray bars and water and/or chemical dust suppressant, as necessary, to maintain compliance with the opacity and reasonable precaution limitations. The Department determined that using water spray bars and water and/or chemical dust suppressant to maintain compliance with the opacity requirements and reasonable precaution limitations constitutes BACT for these sources.

Due to the amount of PM, PM<sub>10</sub>, NO<sub>x</sub>, CO, VOC, and SO<sub>x</sub> emissions produced by the small industrial diesel generator, add-on controls would be cost prohibitive. Thus, the Department determined that no additional control would constitute BACT for the generator. The control options selected have controls and control costs similar to other recently permitted similar sources and these controls are capable of achieving the established emissions limits.

V. Existing Air Quality

Permit #3269-00 is issued for the operation of a portable crushing/screening plant to be initially located in Section 18, Township 22 North, Range 5 East, in Cascade County, Montana. This proposed site is designated as an attainment/unclassified area for the National Ambient Air Quality Standards (NAAQS). Also, this facility is a portable source that would operate on an intermittent and temporary basis and any effects to air quality will be minor and short-lived.

VI. Ambient Air Quality Impact Analysis

Permit #3269-00 will cover the operation while operating at any location within Montana, excluding those counties that have a Department approved permitting program, tribal lands, or those areas in or within 10 kilometers (km) of certain PM<sub>10</sub> nonattainment areas. In the view of the Department, the amount of controlled emissions generated by this facility will not exceed any set ambient standard. In addition, this source is portable and any air quality impacts will be minor and short-lived.

VII. 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.

VIII. Environmental Assessment

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

DEPARTMENT OF ENVIRONMENTAL QUALITY  
Permitting and Compliance Division  
Air and Waste Management Bureau  
1520 East Sixth Avenue  
P.O. Box 200901  
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(406) 444-3490

**FINAL ENVIRONMENTAL ASSESSMENT (EA)**

*Issued For:* Zaco, Inc.  
1143 Franklin Avenue  
Great Falls, Montana 59405

*Permit Number:* #3269-00

*Preliminary Determination Issued:* July 22, 2003  
*Department Decision Issued:* August 7, 2003  
*Permit Final:* August 23, 2003

1. *Legal Description of Site:* Zaco submitted an application to operate a portable crushing/screening plant in Section 18, Township 22 North, Range 5 East, in Cascade County, Montana. Permit #3269-00 would apply while operating at any location in Montana, except within those areas having a Department approved permitting program, tribal lands, or those areas in or within 10 kilometers (km) of certain PM<sub>10</sub> nonattainment areas. An addendum to this air quality permit will be required if Zaco intends to locate in or within 10 km of certain PM<sub>10</sub> nonattainment areas. *A Missoula County air quality permit would be required for locations within Missoula County, Montana.*
2. *Description of Project:* The permit application proposes the construction and operation of a portable crushing/screening plant that would consist of a portable Pre-1983 Pioneer jaw crusher (up to 100 TPH), a 2003 Homemade screen (up to 100 TPH), a diesel generator (up to 210 kilowatts (kW)), and associated equipment. For a typical operational setup, unprocessed materials are loaded into the crushing/screening plant by a hopper and transferred by conveyor and passed through the crusher, where the material is crushed. Materials are crushed and sent to the screen, where materials are separated and conveyed to stockpile.
3. *Objectives of Project:* The company's objective of the project would be to produce business and revenue for the company by the sale and use of aggregate. The issuance of Permit #3269-00 would allow Zaco to operate the permitted equipment at various locations throughout Montana, including the proposed initial site location.
4. *Additional Project Site Information:* In many cases, this crushing/screening operation may move to a general site location or open cut pit, which has been previously permitted through the Industrial and Energy Minerals Bureau (IEMB). If this were the case, additional information for the site would be found in the Mined Land Reclamation Permit for that specific site.
5. *Alternatives Considered:* In addition to the proposed action, the Department 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 Zaco demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the "no-action" alternative was eliminated from further consideration.

6. *A Listing of Mitigation, Stipulations, and Other Controls:* A listing of the enforceable permit conditions and a permit analysis, including a BACT analysis, would be contained in Permit #3269-00.
7. *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 the permit conditions would be reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and would not unduly restrict private property rights.
8. *The following table summarizes the potential physical and biological effects of the proposed project on the human environment. The “no action alternative” was discussed previously.*

		Major	Moderate	Minor	None	Unknown	Comments Included
A.	Terrestrial and Aquatic Life and Habitats			X			yes
B.	Water Quality, Quantity, and Distribution			X			yes
C.	Geology and Soil Quality, Stability, and Moisture			X			yes
D.	Vegetation Cover, Quantity, and Quality			X			yes
E.	Aesthetics			X			yes
F.	Air Quality			X			yes
G.	Unique Endangered, Fragile, or Limited Environmental 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 area as the crushing/screening operations. The crushing/screening operations would be considered a minor source of emissions, with intermittent and seasonal operations. Therefore, only minor effects on terrestrial life would be expected as a result of equipment operations or from pollutant deposition.

Impacts on aquatic life could result from storm water runoff and pollutant deposition, but such impacts would be minor as the facility would be a minor source of emissions (with seasonal and intermittent operations) and only minor amounts of water would be required to be used for pollution control. Since good dispersion of air pollutants would occur in the proposed area of operation and only a minor amount of air emissions would be generated, only minor deposition would occur. Also, the nearest stream, located in Portage Coulee, is approximately 1/5 mile away from the proposed operational site. Therefore, only minor and temporary effects to aquatic life and habitat would be expected from the proposed crushing/screening operation because only minor amounts of pollutants would reach the stream (due to pollution dispersion and the streams distance from the operational site).

B. Water Quality, Quantity, and Distribution

Water would be used for dust suppression on the surrounding roadways and areas of operation and for pollution control for equipment operations. However, water use would only cause a minor disturbance to the area since only relatively small amounts of water would be needed. At most, only minor surface and groundwater quality impacts would be expected as a result of using water for dust suppression because only small amounts of water would be required and the deposition of air pollutants would be minor (as described in Section 8.F of this EA). Additionally, the nearest stream is approximately 1/5 mile away, and the nearest groundwater is approximately 30 feet below the surface. Further, additional water resource protection measures would be required by IEMB and would provide additional protection of these resources.

C. Geology and Soil Quality, Stability, and Moisture

The crushing/screening operations would have only minimal impacts upon soils at the proposed site location from construction, since the facility is relatively small in size and would have seasonal and intermittent operations. Also, the topography of the site would allow for good pollutant dispersion and associated impacts to the surrounding area of operations would be minimal. Therefore, any effects on geology and soil quality, stability, and moisture at the proposed operational site would be minor.

D. Vegetation Cover, Quantity, and Quality

Because the facility would operate in an open-cut pit (at a site where good pollutant dispersion would occur) and because the facility would be a minor source of emissions, impacts from the emissions from the site would be minor.

As described in Section 8.F of this EA, the amount of air emissions from this facility would be minor. As a result, the corresponding deposition of the air pollutants on the surrounding vegetation would also be minor. Also, because the water usage is minimal, as described in Section 8.B, and the associated soil disturbance is minimal, as described in Section 8.C, corresponding vegetative impacts would also be minimal.

E. Aesthetics

The crushing/screening operation would be visible and would create additional noise in the area. However, Permit #3269-00 would include conditions to control emissions, including visible emissions, from the plant. Also, because the crushing/screening operation is portable, would operate on an intermittent and seasonal basis, would locate within an open-cut pit, and would be adjacent to an improved roadway, any visual and noise impacts from the construction and use of the crushing/screening operation would be minor and short-lived.

F. Air Quality

The air quality impacts from the emissions of the crushing/screening operations would be minor because Permit #3269-00 would include conditions limiting the facility's opacity and the crushing/screening production from the plant, as well as requiring water spray bars and other means to control air pollution. Furthermore, the facility would be located in an area where good pollutant dispersion would occur. Permit #3269-00 would also limit total emissions from the crushing/screening operation and any additional equipment operated at the site to 250 tons/year or less, excluding fugitive emissions.

The crushing/screening operations would have temporary and intermittent use, thereby further

reducing potential air quality impacts from the facility emissions. Additionally, since such small and intermittent amounts of deposition would be generated from the crushing/screening operation, only minor impacts upon the surrounding environment would occur. Therefore, because good dispersion would exist within the area of operation and Zaco would be required to control emissions from facility operations, any air quality impacts would be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The Department, in an effort to assess any potential impacts to any unique endangered, fragile, or limited environmental resources in the initial proposed area of operation, contacted the Montana Natural Heritage Program (MNHP). Search results concluded there are no such environmental resources found within the defined area. The defined area, in this case, is defined by the township and range of the proposed site, with an additional one-mile buffer. Therefore, no impacts would be expected to occur.

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

Due to the size of the facility, the crushing/screening operation would only require small quantities of water, air, and energy for proper operation. Small quantities of water would be used for dust suppression and would control emissions being generated at the site. Energy requirements would also be small because the facility is a crushing/screening operation that would be powered by one small diesel generator. The facility would use a limited amount of fuel (a non-renewable resource), would have limited aggregate production, and would have seasonal and intermittent use. In addition, impacts to air resources would be minor because the source is small by industrial standards, would have intermittent and seasonal operations, and because air pollutants generated by the facility would be widely dispersed. Therefore, any impacts to water, air, and energy resources would be minor.

I. Historical and Archaeological Sites

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

J. Cumulative and Secondary Impacts

The crushing/screening operation would cause minor cumulative and secondary impacts to the physical and biological aspects of the human environment because the facility would generate emissions of particulate matter (PM), particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>), oxides of nitrogen (NO<sub>x</sub>), volatile organic compounds (VOC), carbon monoxide (CO), and oxides of sulfur (SO<sub>x</sub>). Noise would also be generated from the site. Emissions and noise would cause minimal disturbance because the site is an existing open-cut pit, designated and used for such operations. Additionally, this facility, in combination with any other Zaco emissions from the site would not be permitted to exceed 250 tons per year of non-fugitive emissions. Overall, any impacts to the physical and biological aspects of the human environment would be minor.

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

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

**SUMMARY OF COMMENTS ON POTENTIAL ECONOMIC AND SOCIAL EFFECTS:** The Department has prepared the following comments.

A. Social Structures and Mores

The crushing/screening operation would cause no disruption to the social structures and mores in the area because the source is a minor source of emissions (by industrial standards) and would only have intermittent operations. Additionally, the equipment would be located in an existing open-cut pit that is designated and used for such purposes. The area is removed from the general population (as the nearest household is 1/3 mile away). Further, the facility would be a minor source of air pollution and would be required to operate according to the conditions that would be placed in Permit #3269-00. Thus, no native or traditional communities would be affected by the proposed project operations and no impacts upon social structures or mores would result.

B. Cultural Uniqueness and Diversity

The cultural uniqueness and diversity of the area would not be impacted by the proposed crushing/screening operation because the site and surrounding area have been designated and used for such purposes and are separated from the general population. Additionally, the facility would be considered a portable/temporary source with seasonal and intermittent operations. The predominant use of the surrounding area would not change as a result of this project.

C. Local and State Tax Base and Tax Revenue

The crushing/screening operation would have little, if any, impact on the local and state tax base and tax revenue because the facility would be a relatively small industrial source and would operate seasonally and intermittently. The facility would require only a few employees. Thus, only minor, if any, impacts to the local and state tax base and revenue would be expected from



the employees and facility production. Furthermore, the impacts to local tax base and revenue is expected to be minor because the source would also be portable and the money generated for taxes would be widespread.

D. Agricultural or Industrial Production

The crushing/screening operations would have only a minor impact on local industrial production since the facility is a minor source of material (small by industrial standards) and would locate in an existing open-cut pit. There would be minor effects on agricultural land because the facility would be operating in an open-cut pit, surrounded by an area that is used for growing winter wheat. However, the facility operations are small and temporary in nature, and would be permitted with operational conditions and limitations that would minimize air impacts upon surrounding vegetation, as described in Section 8.D of this EA. Additionally, pollution control would be utilized on equipment operations and production limits would be established to protect the surrounding environment.

E. Human Health

Permit #3269-00 would incorporate conditions to ensure that the crushing/screening facility 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. As described in Section 8.F. of this EA, the air emissions from this facility would be minimized by the use of water spray and other conditions that would be established in Permit #3269-00. Therefore, only minor impacts would be expected upon human health from the proposed crushing/screening facility.

F. Access to and Quality of Recreational and Wilderness Activities

The crushing/screening plant would be operated adjacent to an existing roadway and within the confines of an existing open-cut pit. Therefore, only minor impacts upon the access to and quality of recreational and wilderness activities would exist. However, no changes from the existing opportunities for recreational and wilderness activities in the area would be expected from the operation of the crushing/screening facility because the site is already being utilized for such operations. Additionally, noise from the facility would be minor because the facility is quite small and would operate within the confines of an existing open-cut pit. Also, the facility would operate on a seasonal and intermittent basis. Therefore, any changes in the quality of recreational and wilderness activities from noise, created by operating the equipment at the site, would be expected to be minor and intermittent.

G. Quantity and Distribution of Employment

The crushing/screening operation is a portable source, with seasonal and intermittent operations, and would have only minor effects on the quantity and distribution of employment in the area because only a few employees would be needed for such operations and no new employees are expected to be added.

H. Distribution of Population

The portable crushing/screening operation is small and would only require a few employees to operate. Also, no individuals would be expected to permanently relocate to the area as a result of operating the crushing/screening facility. The crushing/screening operation would only have intermittent and seasonal operations and would not disrupt the normal population distribution in the initial area.

I. Demands of Government Services

Minor increases would be seen in traffic on existing roadways in the area while the crushing/screening operation is in progress. In addition, government services would be required for acquiring the appropriate permits from government agencies and existing compliance with those permit. Demands for government services would be minor.

J. Industrial and Commercial Activity

The crushing/screening operation would represent only a minor increase in the industrial activity in the area because the source would be a minor source (relatively small in size by industrial standards) and would be portable and temporary in nature. No additional industrial or commercial activity would be expected as a result of the proposed operation.

K. Locally Adopted Environmental Plans and Goals

Zaco would be allowed, by permit, to operate in areas designated by EPA as attainment or unclassified. The permitted production limits and opacity limits would be protective of air quality while the facility is operating in any location within Montana, except within those areas having a Department approved permitting program or within 10 km of certain PM<sub>10</sub> nonattainment areas. Because the facility would be a small and portable source, and would have intermittent and seasonal operations, any effects from the facility would be minor and short-lived.

L. Cumulative and Secondary Impacts

The crushing/screening operations would cause minor cumulative and secondary impacts to the social and economic aspects of the human environment in the immediate area because the source is a portable, temporary source. Minor increases in traffic would have minor effects on local traffic in the immediate area, thus, having a direct effect on the social environment. Because the source is relatively small and temporary, only minor economic impacts to the local economy would be expected from the operation of the facility. Thus, minor and temporary cumulative effects would result to the local economy.

*Recommendation:* An EIS is not required.

*If an EIS is not required, explain why the EA is an appropriate level of analysis:* All potential effects resulting from construction and operation of the proposed facility are minor; therefore, an EIS is not required.

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

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

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