Montana Department of
ENVIRONMENTAL QUALITY
Brian Schweitzer, Governor
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July 6, 2011

Todd Moore
N.A. Degerstrom, Inc.
P.O. Box 425
Spokane, WA 99210-0425

Dear Mr. Moore:

Montana Air Quality Permit #4582-01 is deemed final as of July 6, 2011, by the Department of Environmental Quality (Department). This permit is for a portable crushing/screening operation. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,

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

Julie Merkel
Air Quality Specialist
Air Resources Management Bureau
(406) 444-3626

VW:JM
Enclosure

Montana Department of Environmental Quality
Permitting and Compliance Division

Montana Air Quality Permit #4582-01

N.A. Degerstrom, Inc.
P.O. Box 425
Spokane, WA 99210-0425

July 6, 2011

MONTANA AIR QUALITY PERMIT

Issued To: N.A. Degerstrom, Inc.
P.O. Box 425
Spokane, WA 99210-0425

MAQP: #4582-01
Request for Administrative Amendment (AA) Received: 11/4/2010
Department's Decision on AA Issued: 6/17/11
Permit Final: 07/06/11
AFS #: 777-4582

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to N.A. Degerstrom, Inc. (N.A. Degerstrom) pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq*., as amended, for the following:

SECTION I: Permitted Facilities

A. Plant Location

N.A. Degerstrom operates a portable crushing and screening operation, and initially located in the Southwest ¼, of Section 15, Township 1 South, Range 25 East, in Yellowstone County, Montana. However, MAQP #4582-01 applies while operating at any location in Montana, except those areas having a Department of Environmental Quality (Department)-approved permitting program, areas considered tribal lands, or areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana*.

Addendum #1 will apply to the N.A. Degerstrom facility while operating at any location in or within 10 km of certain PM_{10} nonattainment areas during the summer months (April 1 – September 30) and sites approved by the Department during the winter months (October 1 – March 31).

B. Current Permit Action

On November 4, 2010, the Department received a request from N.A. Degerstrom to amend MAQP #4582-00 to include an Addendum with conditions that apply while operating in any location in or within 10 km of certain PM_{10} nonattainment areas.

SECTION II: Conditions and Limitations

A. Emission Limitations

1. All visible emissions from any Standards of Performance for New Stationary Source (NSPS) – affected crusher shall not exhibit an opacity in excess of the following averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO):

- For crushers that commence construction, modification, or reconstruction on or after April 22, 2008: 12% opacity
- For crushers that commence construction, modification, or reconstruction after August 31, 1983, but before April 22, 2008: 15% opacity

2. All visible emissions from any other NSPS-affected equipment (such as screens and conveyors) shall not exhibit an opacity in excess of the following averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO):

   - For equipment that commence construction, modification, or reconstruction on or after April 22, 2008: 7% opacity
   - For equipment that commence construction, modification, or reconstruction after August 31, 1983, but before April 22, 2008: 10% opacity

3. All visible emissions from any non-NSPS affected equipment shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).

4. Water and spray bars shall be available on-site at all times and operated as necessary to maintain compliance with the opacity limitations in Sections II.A.1, II.A.2, and II.A.3 (ARM 17.8.749 and ARM 17.8.752).

5. N.A. Degerstrom shall not cause or authorize the use of any street, road or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).

6. N.A. Degerstrom shall treat all unpaved portions of the haul roads, access roads, parking lots, or the general plant area with water and/or chemical dust suppressant, as necessary, to maintain compliance with the reasonable precautions limitation in Section II.A.5 (ARM 17.8.749).

7. N.A. Degerstrom shall not operate more than one crusher at any given time and the maximum rated design capacity of the crusher shall not exceed 300 TPH (ARM 17.8.749).

8. Crushing production is limited to 2,628,000 tons during any rolling 12-month time period (ARM 17.8.749).

9. N.A. Degerstrom shall not operate more than one screen at any given time and the maximum rated design capacity of the screen shall not exceed 300 TPH (ARM 17.8.749).

10. Screening production is limited to 2,628,000 tons during any rolling 12-month time period (ARM 17.8.749).

11. N.A. Degerstrom shall not operate more than two diesel-fired engines/generators. The combined maximum capacity of the engines that drive the generators shall not exceed 850 hp (ARM 17.8.749).

12. N.A. Degerstrom shall not operate the diesel-fired engines/generators for a combined total of more than 6000 hours per year (hr/yr) (ARM 17.8.749 and ARM 17.8.1204).

13. If the permitted equipment is used in conjunction with any other equipment owned or operated by N.A. Degerstrom, at the same site, production shall be limited to correspond with an emission level that does not exceed 250 tons during any rolling 12-month period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).

14. N.A. Degerstrom shall comply with all applicable standards and limitations, monitoring, reporting, recordkeeping, testing, and notification requirements contained in 40 CFR 60, Subpart OOO, *Standards of Performance for Nonmetallic Mineral Processing Plants* (ARM 17.8.340 and 40 CFR 60, Subpart OOO).

15. N.A. Degerstrom shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* and 40 CFR 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, for any applicable diesel engine (ARM 17.8.340; 40 CFR 60, Subpart IIII; ARM 17.8.342 and 40 CFR 63, Subpart ZZZZ).

B. Testing Requirements

1. Within 60 days after achieving maximum production, but no later than 180 days after initial start-up, an Environmental Protection Agency (EPA) Method 9 opacity test and/or other methods and procedures as specified in 40 CFR 60.675 must be performed on all NSPS-affected equipment to demonstrate compliance with the emission limitations contained in Section II.A.1 and II.A.2 (ARM 17.8.340 and 40 CFR 60, Subpart A and Subpart OOO). Additional testing may be required by 40 CFR 60, Subpart OOO (ARM 17.8.340 and 40 CFR 60 Subpart OOO).

2. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

3. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. If this crushing/screening plant is moved to another location, an Intent to Transfer form must be sent to the Department and a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.749 and ARM 17.8.765).

2. N.A. Degerstrom shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but not be limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

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

3. N.A. Degerstrom shall notify the Department of any construction or improvement project conducted, pursuant to ARM 17.8.745, that would include ***the addition of a new emissions unit***, change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation. The notice must be

submitted to the Department, in writing, 10 days prior to startup or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(l)(d) (ARM 17.8.745).

4. N.A. Degerstrom shall maintain on-site records showing daily hours of operation and daily production rates for the last 12 months. The records compiled in accordance with this permit shall be maintained by N.A. Degerstrom as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

5. N.A. Degerstrom shall document, by month, the crushing production from the facility. By the 25th day of each month, N.A. Degerstrom shall calculate the crushing production from the facility for the previous month. The monthly information will be used to demonstrate compliance with the rolling 12-month limitation in Section II.A.8. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

6. N.A. Degerstrom shall document, by month, the screening production from the facility. By the 25th day of each month, N.A. Degerstrom shall calculate the screening production from the facility for the previous month. The monthly information will be used to demonstrate compliance with the rolling 12-month limitation in Section II.A.10. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

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

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

D. Notification

N.A. Degerstrom shall provide the Department with written notification of the actual start-up date of the crushing/screening operation postmarked within 15 days after the actual start-up date (ARM 17.8.749).

SECTION III: General Conditions

A. Inspection – N.A. Degerstrom shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (Continuous Emissions Monitoring System (CEMS), Continuous Emissions Rate Monitoring System (CERMS)) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.

B. Waiver – The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if N.A. Degerstrom fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving N.A. Degerstrom of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided for in ARM 17.8.740, *et seq*. (ARM 17.8.756)

D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement as specified in Section 75-2-401, *et seq*., MCA.

E. Appeals – Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.

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

G. Air Quality Operation Fees – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by N.A. Degerstrom may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.

H. Duration of Permit – Construction or installation must begin or contractual obligations entered into that would constitute substantial loss within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (ARM 17.8.762).

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

J. N.A. Degerstrom shall comply with the conditions contained in this permit while operating in any location in Montana, except within those areas that have a Department-approved permitting program or areas considered tribal lands.

Montana Air Quality Permit (MAQP) Analysis
N.A. Degerstrom Inc.
MAQP #4582-01

I. Introduction/Process Description

N.A. Degerstrom Inc. (N.A. Degerstrom) proposes to own and operate a portable crushing and screening facility.

A. Permitted Equipment

N.A. Degerstrom proposes to operate the following equipment:

- One (1) 300 tons per hour (TPH) Crusher
- Five (5) Conveyors
- One (1) 300 TPH Screen
- Up to two (2) generator engines with a combined maximum rating of 850 horsepower (hp)
- Associated Equipment

B. Source Description

N.A. Degerstrom proposes to operate the aforementioned equipment to crush and sort concrete, sand and gravel like materials for various uses.

C. Permit History

N.A. Degerstrom was issued **MAQP #4582-00** on November 20, 2010, for the operation of a portable crushing/screening facility to be operated in various locations throughout Montana.

D. Current Permit Action

On November 4, 2010, the Department received a request from N.A. Degerstrom to amend MAQP #4582-00 to include an Addendum with conditions that apply while operating in any location in or within 10 km of certain PM_{10} nonattainment areas. **MAQP #4582-01** replaces MAQP #4582-00.

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

A. ARM 17.8, Subchapter 1 – General Provisions, including, but not limited to:

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

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

3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source, or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq*., Montana Code Annotated (MCA).

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

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.

5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to:

1. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
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 17.8.213 Ambient Air Quality Standard for Ozone
5. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
6. ARM 17.8.221 Ambient Air Quality Standard for Visibility
7. ARM 17.8.223 Ambient Air Quality Standard for PM_{10}

N.A. Degerstrom must maintain compliance with the applicable ambient air quality standards.

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

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

2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, N.A. Degerstrom shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.

3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this section.

4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter in excess of the amount set forth in this section.

5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this section.

6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank truck or trailer is equipped with a vapor loss control device as described in (1) of this rule.

7. ARM 17.8.340 Standard of Performance for New Stationary Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). N.A. Degerstrom is considered an NSPS affected facility under 40 CFR Part 60 and is potentially subject to the requirements of the following subparts.

   a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to an NSPS Subpart as listed below:

   b. 40 CFR 60, Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants. In order for a crushing plant to be subject to this subpart, the facility must meet the definition of an affected facility and, the affected equipment must have been constructed, reconstructed, or modified after August 31, 1983. Based on the information submitted by N.A. Degerstrom, the portable crushing equipment to be used under MAQP #4582-01 is subject to this subpart because the crushing capacity of the operation is greater than 150 tons per year and construction, modification, or reconstruction has commenced after August 31, 1983.

   c. 40 CFR 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE). Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006, and are not fire pump engines, and owners and operators of stationary CI ICE that modify or reconstruct their stationary CI ICE after July 11, 2005, are subject to this subpart. Based on the information submitted by N.A. Degerstrom, the CI ICE originally

permitted to be used under MAQP #4582-01 is not subject to this subpart. However, as this permit is written in a de minimis friendly manner, future engines associated with this permit may be subject to this Subpart.

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

   a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to a NESHAPs Subpart as listed below.

   b. 40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants (HAPs) for Stationary Reciprocating Internal Combustion Engines (RICE). An owner or operator of a stationary reciprocating internal combustion engine (RICE) at a major or area source of HAP emissions is subject to this rule except if the stationary RICE is being tested at a stationary RICE test cell/stand. Therefore, if the engine remains on-site for greater than one year, meeting the definition of stationary RICE, the engine may become subject to this subpart.

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

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. N.A. Degerstrom was not required to submit an application fee for the current permit action because it is considered an administrative action.

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

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

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

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

2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit modification to construct, modify, or use any crushing/screening plant that has the potential to emit (PTE) greater than 15 tons per year of any pollutant. N.A. Degerstrom has a PTE greater than 15 tons per year of oxides of nitrogen (NO_X), carbon monoxide (CO), and particulate matter (PM); therefore, an MAQP is required.

3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.

4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.

5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. N.A. Degerstrom was not required to submit a complete application for the current permit action because it is considered an administrative amendment. (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. N.A. Degerstrom was not required to submit a public notice for the current permit action because the action is considered an administrative amendment.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.

7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section III of this permit analysis.

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

9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving N.A. Degerstrom 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 MAQP shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or modified source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.

12. ARM 17.8.763 Revocation of Permit. An MAQP 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 MAQP may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.

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

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

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

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

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

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

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any stationary source having:

   a. PTE > 100 tons/year of any pollutant;

   b. PTE > 10 tons/year of any one hazardous air pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or

   c. PTE > 70 tons/year of particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) in a serious PM_{10} nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (1) Title V of the FCAA Amendments of 1990 requires that all sources, as defined in ARM 17.8.1204 (1), obtain a Title V Operating Permit. In reviewing and issuing MAQP #4582-01 for N.A. Degerstrom, the following conclusions were made:

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

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

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

d. This facility is subject to current NSPS (40 CFR 60, Subpart OOO).

e. This facility is potentially subject to area source provisions of current NESHAP standards (40 CFR 63, Subpart ZZZZ).

f. This source is not a Title IV affected source

g. This source is not a solid waste combustion unit.

h. This source is not an EPA designated Title V source.

N.A. Degerstrom requested federally-enforceable permit limitations to remain a minor source of emissions with respect to Title V. Based on these limitations, the Department determined that this facility is not subject to the Title V Operating Permit Program. However, in the event that the EPA makes minor sources that are subject to NSPS obtain a Title V Operating Permit, this source will be subject to the Title V Operating Permit Program.

i. ARM 17.8.1204(3). The Department may exempt a source from the requirement to obtain an air quality operating permit by establishing federally enforceable limitations which limit that source's PTE.

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

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

3. ARM 17.8.1207 Certification of Truth, Accuracy, and Completeness. The compliance certification submittal by ARM 17.8.1204(3) shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this subchapter shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete

III. BACT Determination

A BACT determination is required for each new or modified source. N.A. Degerstrom shall install on the new or modified source the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized. The current permit action is considered an administrative amendment; therefore, a BACT analysis is not required.

IV. Emission Inventory**

Potential To Emit in Tons Per Year N.A. Degerstrom Inc. – MAQP #4582-01							
Source	PM	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_X	VOC
300 TPH Crusher	1.58	0.71	0.13	N/A	N/A	N/A	N/A
300 TPH Screen	2.89	0.97	0.07	N/A	N/A	N/A	N/A
Transfers	1.66	0.54	0.15	N/A	N/A	N/A	N/A
Piles	9.72	4.60	0.66	N/A	N/A	N/A	N/A
Raw Material Unloading	0.02	0.02	ND	N/A	N/A	N/A	N/A
Haul Roads	5.49	1.51	0.15	N/A	N/A	N/A	N/A
Generator Engines	5.61	5.61	5.61	79.05	17.03	5.23	6.41
TOTAL	26.97	13.96	6.77	79.05	17.03	5.23	6.41

**

CO = carbon monoxide
hp = horsepower
N/A = not applicable
NO_X = oxides of nitrogen
PM = particulate matter
PM_{10} = particulate matter with an aerodynamic diameter of 10 microns or less
$PM_{2.5}$ = particulate matter with an aerodynamic diameter of 2.5 microns or less
SO_X = oxides of sulfur
VOC = volatile organic compounds

Crusher

Maximum Capacity: 300 ton/hr (MAQP 4582-01 Application)
Hours of Operation: 8760 hr/yr

PM Emissions

Emissions Factor: 0.0012 lb/ton (AP-42 Table 11.19.2-2, 08/2004)
Calculations: 0.0012lb/ton*300ton/hr*8760hr/yr= 3154.20 lb/yr
3154.20 lb/yr*0.0005 ton/lb = **1.58** **ton/yr**

PM_{10} Emissions

Emissions Factor: 0.00054 lb/ton (AP-42 Table 11.19.2-2, 08/2004)
Calculations: 0.00054lb/ton*300ton/hr*8760hr/yr= 1419.12 lb/yr
1419.12 lb/yr*0.0005 ton/lb = **0.71** **ton/yr**

$PM_{2.5}$ Emissions

Emissions Factor: 0.0001 lb/ton (AP-42 Table 11.19.2-2, 08/2004)
Calculations: 0.0001lb/ton*300ton/hr*8760hr/yr= 262.80 lb/yr
262.80 lb/yr*0.0005 ton/lb = **0.13** **ton/yr**

Screen

Maximum Capacity: 300 ton/hr (MAQP 4582-01 Application)
Hours of Operation: 8760 hr/yr

PM Emissions

Emissions Factor: 0.0022 lb/ton (AP-42 Table 11.19.2-2, 08/2004)
Calculations: 0.0022lb/ton*300ton/hr*8760hr/yr= 5781.60 lb/yr
5781.60 lb/yr*0.0005 ton/lb = **2.89** **ton/yr**

PM_{10} Emissions

Emissions Factor:	0.00074	lb/ton	(AP-42 Table 11.19.2-2, 08/2004)		
Calculations:	0.00074lb/ton*300ton/hr*8760hr/yr=			1944.72	lb/yr
	1944.72 lb/yr*0.0005 ton/lb =			**0.97**	**ton/yr**

$PM_{2.5}$ Emissions

Emissions Factor:	0.00005	lb/ton	(AP-42 Table 11.19.2-2, 08/2004)		
Calculations:	0.00005lb/ton*300ton/hr*8760hr/yr =			131.40	lb/yr
	131.40 lb/yr*0.0005 ton/lb =			**0.07**	**ton/yr**

Generator Engines

Maximum Capacity:	850	hp	(MAQP #4582-01 Application)
Hours of Operation:	**6000**	**hr/yr**	

PM, PM_{10}, and $PM_{2.5}$ Emissions:
*note: All PM Emissions are assumed to be PM_{10} and $PM_{2.5}$ Emissions

Emissions Factor:	0.0022	lb/hp-hr	(AP-42 Table 3.3-1, 10/1996)		
Calculations:	0.0022lb/hp-hr*850hp*6000hr/yr=			11220	lb/yr
	11220.0lb/yr*0.0005 ton/lb =			**5.61**	**ton/yr**

NO_X Emissions:

Emissions Factor:	0.031	lb/hp-hr	(AP-42 Table 3.3-, 10/1996)		
Calculations:	0.031 lb/hp-hr * 850hp*6000hr/yr=			158100	lb/yr
	158100lb/yr*0.0005 ton/lb =			**79.05**	**ton/yr**

CO Emissions:

Emissions Factor:	0.00668	lb/hp-hr	(AP-42 Table 3.3-1, 10/1996)		
Calculations:	0.00668lb/hp-hr*850hp*6000hr/yr=			34068	lb/yr
	34068lb/yr*0.0005 ton/lb =			**17.03**	**ton/yr**

SO_X Emissions:

Emissions Factor:	0.00205	lb/hp-hr	(AP-42 Table 3.3-1, 10/1996)		
Calculations:	0.00205lb/hp-hr*850hp*6000hr/yr=			10455	lb/yr
	10455lb/yr*0.0005 ton/lb =			**5.23**	**ton/yr**

VOC Emissions:

Emissions Factor:	0.0025141	lb/hp-hr	(AP-42 Table 3.3-1, 10/1996)		
Calculations:	0.0025141lb/hp-hr*850hp*6000hr/yr=			12821.9	lb/yr
	12821.9lb/yr*0.0005 ton/lb =			**6.41**	**ton/yr**

Transfer Points

Maximum Capacity:	300	TPH
Hours of Operation:	8760	hr/yr
Number of Transfers:	9	transfers

PM Emissions:

Emissions Factor:	0.00014	lb/ton	(AP-42 Table 11.19.2-2, 08/2004)	
Calculations:	0.00014lb/ton*300TPH*8760hr/yr=		367.92	lb/yr-transfer
	367.92lb/yr-transfer*9transfers*0.0005ton/lb =		**1.66**	**ton/yr**

PM_{10} Emissions:

Emissions Factor:	0.000046	lb/ton	(AP-42 Table 11.19.2-2, 08/2004)	
Calculations:	0.000046lb/ton*300TPH*8760hr/yr=		120.89	lb/yr-transfer
	120.89 lb/yr-transfer*9transfers*0.0005ton/lb =		**0.54**	**ton/yr**

$PM_{2.5}$ Emissions:

Emissions Factor:	0.000013	lb/ton	(AP-42 Table 11.19.2-2, 08/2004)	
Calculations:	0.000013lb/ton*300TPH*8760hr/yr=		34.16	lb/yr-transfer
	34.16lb/yr-transfer*9transfers*0.0005ton/lb =		**0.15**	**ton/yr**

Haul Roads

$$E = k\,(s/12)^a (W/3)^b$$

E = size-specific emission factor (lb/VMT)
s = surface material silt content (%)
W = mean vehicle weight (tons)

s =	7.1	%	(AP-42 Table 13.2.2-1, 11/2006)
k =	0.15	for $PM_{2.5}$	(AP-42 Table 13.2.2-2, 11/2006)
	1.5	for PM_{10}	
	4.9	for PM	
W =	50	estimated	
a =	0.9	$PM_{2.5}$ and PM_{10}	
	0.7	PM	
b =	0.45		
VMT =	5	VMT	standard estimate

PM Emissions

Emissions Factor:	12.04	lb/VMT	PM	
Calculations:	12.035994738732lb/VMT*5VMT=		60.18	lb/day
	60.18lb/day*0.0005 ton/lb*365day/yr =		10.98	ton/yr
	10.9828451990929ton/yr*50% control factor =		**5.49**	**ton/yr**

PM_{10} Emissions

Emissions Factor:	3.32	lb/VMT	
Calculations:	3.31735988588915lb/VMT*5VMT=	16.5868	lb/yr
	16.5868lb/yr*0.0005 ton/lb*365day/yr=	3.027091	ton/yr
	3.02709089587385ton/yr*50% control factor =	**1.51**	**ton/yr**

$PM_{2.5}$ Emissions

Emissions Factor:	0.331736 lb/VMT		
Calculations:	0.331735989lb/VMT*5VMT=	1.65868	lb/yr
	1.65868lb/yr*0.0005 ton/lb*365day/yr=	0.302709	ton/yr
	0.3027090899625ton/yr*50% control factor =	**0.15**	**ton/yr**

Raw Material Handling

Hours of operation: 8760 hr/yr

PM_{10} Emissions

Emissions Factor:	0.000016 lb/ton (AP-42 Table 11.19.2-2, 08/2004)		
Calculations:	0.000016lb/ton*300 ton/hr*8760hr/yr=	42.05	lb/yr
	42.05 lb/yr*0.0005 ton/lb =	**0.02**	**ton/yr**

PM Emissions: no data available, =/> 0.03
$PM_{2.5}$ Emissions: no data, <0.03

Pile Emissions

These calculations account for
1. Loading of aggregate onto storage piles (batch or continuous drop operations).
2. Equipment traffic in storage area.
3. Wind erosion of pile surfaces and ground areas around piles.
4. Loadout of aggregate for shipment or for return to the process stream (batch or continuous drop operations).

*For calculations, one pile at max process rate accounts for the product piles from screen w/ moisture carry over
Reapplication of water on the piles may be required to maintain the moisture content

$$E = k(0.0032) \frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}} \text{ (pound [lb]/ton)}$$

where:

E = emission factor
k = particle size multiplier (dimensionless)
U = mean wind speed, meters per second (m/s) (miles per hour [mph])
M = material moisture content (%)

BASED ON AP-42 Chapter 13 - 11/2006

k =	0.74	PM_{30}
	0.35	PM_{10}
	0.053	$PM_{2.5}$
U =	9.1	MPH
M =	1.55	Avg. moisture content, AP-42 Table 11.19.2-1 Note b

PM Emissions:

Emissions Factor:	0.0074 lb/ton		
Calculations:	0.0074lb/ton*300TPH*8760hr/yr=	19447.2	lb/yr
	19447.2 lb/yr*0.0005ton/lb =	**9.72**	**ton/yr**

PM_{10} Emissions:

Emissions Factor:	0.0035 lb/ton		
Calculations:	0.0035lb/ton*300TPH*8760hr/yr=	9198.00	lb/yr
	9198.00 lb/yr*0.0005ton/lb =	**4.60**	**ton/yr**

$PM_{2.5}$ Emissions:

Emissions Factor:	0.0005 lb/ton		
Calculations:	0.0005lb/ton*350TPH*8760hr/yr=	1314.00	lb/yr
	1314.00 lb/yr*0.0005ton/lb =	**0.66**	**ton/yr**

V. Ambient Air Impact Analysis

MAQP #4582-01 is issued for the operation of a portable crushing and screening plant to be initially located in the Southwest ¼, of Section 15, Township 1 South, Range 25 East, in Yellowstone County, Montana. MAQP #4582-01 will also cover the plant while operating at any location within Montana, excluding those counties that have a Department approved permitting program, those areas considered tribal lands, or those areas in or within 10 kilometers (km) of certain PM_{10} nonattainment areas. Addendum 1, which includes more stringent requirements to protect the non-attainment area, applies while operating at locations in or within 10 km of certain PM_{10} nonattainment areas. *A Missoula County air quality permit would be required for locations within Missoula County, Montana*.

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

VII. Taking or Damaging Implication Analysis

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

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

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

VIII. Environmental Assessment

An environmental assessment was not required for the current permit action because it is considered an administrative amendment.

Addendum 1
N.A. Degerstrom
Montana Air Quality Permit (MAQP) #4582-01

An addendum to MAQP #4582-01 is hereby granted to N.A. Degerstrom, Inc. (N.A. Degerstrom) pursuant to Section 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.765, as amended, for the following:

I. Permitted Equipment:

N.A. Degerstrom owns and operates a portable crushing/screening plant and associated equipment including a crusher with a maximum throughput of 300 tons per hour (TPH), a screen with a maximum throughput of 300 TPH, and up to two diesel-fired engines/generators with a maximum combined capacity of up to 850 horsepower (hp).

Addendum 1 applies to the N.A. Degerstrom facility while operating at any location in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) nonattainment areas; Libby, Thompson Falls, Kalispell, Whitefish, Columbia Falls, and Butte.

II. Seasonal and Site Restrictions – **Winter and Summer Seasons**

Addendum 1 applies to the N.A. Degerstrom facility while operating at any location in or within 10 (km) of certain PM_{10} nonattainment areas. Additionally, seasonal and site restrictions apply to the facility as follows:

A. During the winter season (October 1-March 31) —N.A. Degerstrom may operate at locations in or within 10 km of certain PM_{10} nonattainment areas.

B. During the summer season (April 1-September 30) – N.A. Degerstrom may operate at any location in or within 10 km of the Butte, Columbia Falls, Kalispell, Libby, Thompson Falls, and Whitefish PM_{10} nonattainment areas.

C. N.A. Degerstrom shall comply with the limitations and conditions contained in Addendum 1 to MAQP #4582-01 while operating in or within 10 km of any of the previously identified PM_{10} nonattainment areas. Addendum 1 shall be valid until revoked or modified. The Department reserves the authority to modify Addendum 1 at any time based on local conditions of any future site. These conditions may include, but are not limited to, local terrain, meteorological conditions, proximity to residences or other businesses, etc.

III. Limitations and Conditions

A. Operational Limitations and Conditions – **Winter Season (October 1 – March 31)**

1. All visible emissions from the crushing/screening plant may not exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).

2. All visible emissions from any equipment, such as transfer points, shall not exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749 and 40 CFR 60, Subpart OOO).

3. Water and spray bars shall be available on site at all times and operated as necessary to maintain compliance with the opacity limitations in Sections III.A.1 and III.A.2 (ARM 17.8.749).

4. N.A. Degerstrom shall not cause or authorize to be discharged into the atmosphere from haul roads, access roads, parking lots, or the general plant property any visible fugitive emissions that exhibit an opacity of 10% or greater (ARM 17.8.749).

5. N.A. Degerstrom shall treat all unpaved portions of the access roads, parking lots, and general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the 10% opacity limitation (ARM 17.8.749).

6. N.A. Degerstrom shall operate one crusher and the maximum rated design capacity shall not exceed 300 tons per hour (ARM 17.8.749).

7. Crushing production shall not exceed 7200 tons during any rolling 24-hour time period when operating on land-line power (ARM 17.8.749).

8. Crushing production shall not exceed 900 tons during any rolling 24-hour time period when operating on the diesel-fired engines/generators (ARM 17.8.749).

9. N.A. Degerstrom shall operate no more than one screen and the maximum rated design capacity shall not exceed 300 tons per hour (ARM 17.8.749)

10. Screening production shall not exceed 7200 tons during any rolling 24-hour time period while operating on land-line power (ARM 17.8.749).

11. Screening production shall not exceed 900 tons during any rolling 24-hour time period while operating on the diesel-fired engines/generators (ARM 17.8.749).

12. N.A. Degerstrom shall not operate more than two diesel-fired engines/generators at any given time and the maximum rated design capacity shall not exceed 850 hp (ARM 17.8.749).

13. Operation of the generators shall not exceed 3 hours during any rolling 24-hour time period (ARM 17.8.749).

14. If the permitted equipment is used in conjunction with any other equipment owned or operated by N.A. Degerstrom, at the same site, production shall be limited to correspond with an emission level that does not exceed 250 tons during any rolling 12-month period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).

B. Operational Conditions and Limitations – **Summer Season (April 1 – September 30)**

1. All visible emissions from the crushing/screening plant may not exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).

2. N.A. Degerstrom shall not cause or authorize to be discharged into the atmosphere from any other equipment, such as screens or transfer points, any visible emissions that exhibit opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).

3. Water and spray bars shall be available on sitte at all times and operated as necessary to maintain compliance with the opacity limitations in Section III.B.1. and III.B.2 (ARM 17.8.749).

4. N.A. Degerstrom shall not cause or authorize to be discharged into the atmosphere from haul roads, access roads, parking lots, or the general plant property any visible fugitive emissions that exhibit an opacity of 10% or greater (ARM 17.8.749).

5. N.A. Degerstrom shall treat all unpaved portions of the access roads, parking lots, and general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the opacity limitation in Section III.B.4 (ARM 17.8.749).

6. N.A. Degerstrom shall operate no more than one crushers and the maximum rated design capacity shall not exceed 300 tons per hour (ARM 17.8.749).

7. Crushing production shall not exceed 7200 tons during any rolling 24-hour time period (ARM 17.8.749).

8. N.A. Degerstrom shall operate no more than one screen and the maximum rated design capacity shall not exceed 300 tons per hour (ARM 17.8.749).

9. Screening production shall not exceed 7200 tons during any rolling 24-hour time period (ARM 17.8.749).

10. N.A. Degerstrom shall not operate more than two diesel engines/generators at any given time and the maximum rated design capacity shall not exceed 850 hp (ARM 17.8.749).

11. Operation of the engine generator shall not exceed 16 hours during any rolling 24-hour time period (ARM 17.8.749).

C. Operational Reporting Requirements

1. If this portable crushing/screening plant is moved to another nonattainment location, an Intent to Transfer form must be sent to the Department and a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.749 and ARM 17.8.765).

2. Production information for the sites covered by this addendum must be maintained for 5 years and submitted to the Department upon request. The information must include (ARM 17.8.749):

   a. Tons of material crushed at each site;

   b. Tons of material screened at each site;

   c. Tons of bulk material loaded at each site (production);

   d. Daily hours of operation at each site;

   e. Gallons of diesel fuel used for the generators/engines at each site;

   f. Hours of operation and size of each generator at each site;

   g. Fugitive dust information consisting of the total miles driven on unpaved roads for all plant vehicles.

3. N.A. Degerstrom shall document, by day, the total crushing production. N.A. Degerstrom shall sum the total production for the previous 24 hours to verify compliance with the limitations in Section III.A.7, III.A.8, III.A.10, III.A.11, III.B.7, and III.B.9. A written report of compliance and the emissions inventory shall be submitted to the Department annually. The report for the previous calendar year shall be submitted and may be submitted along with the annual emissions inventory (ARM 17.8.749).

4. N.A. Degerstrom shall document, by day, the total hours of operation of the diesel engine/generator. N.A. Degerstrom shall sum the total hours of operation for the previous 24 hours to verify compliance with the limitation in Sections III.A.11, and III.B.11. A written report of compliance verification and the emissions inventory shall be submitted to the Department annually. The report for the previous calendar year shall be submitted and may be submitted along with the annual emissions inventory (ARM 17.8.749).

Addendum 1 Analysis
N.A. Degerstrom, Inc.
Montana Air Quality Permit (MAQP) #4582-01

I. Permitted Equipment

N.A. Degerstrom, Inc. (N.A. Degerstrom) owns and operates a portable crushing/screening plant and associated equipment including a crusher with a maximum throughput of 300 tons per hour (TPH), a screen with a maximum throughput of 300 TPH, and up to two diesel-fired engines/generators with a maximum combined capacity of up to 850 horsepower (hp).

II. Source Description

N.A. Degerstrom operates a portable crushing and screening operation, which initially located in the Southwest ¼, of Section 15, Township 1 South, Range 25 East, in Yellowstone County, Montana. However, MAQP #4582-01 applies while operating at any location in Montana, except those areas having a Department of Environmental Quality (Department)-approved permitting program, areas considered tribal lands, or areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana*. Addendum 1 will apply for locations in or within 10 km of certain PM_{10} nonattainment areas.

III. 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. Upon request, the Department will provide references for locations of complete copies of all applicable rules and regulations or copies where appropriate.

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

A. ARM 17.8.749 Conditions for Issuance 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.

B. 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. A source may not increase its emissions beyond those found in its permit unless the source applies for and receives another permit.

C. ARM 17.8.765 Transfer of Permit. An air quality permit may be transferred from one location to another if:

1. Written notice of intent to transfer location and proof of public notice are sent to the Department;

2. The source will operate in the new location for a period of less than 1 year; and

3. The source will not have any significant impact on any nonattainment area or any Class I area.

N.A. Degerstrom must submit proof of compliance with the transfer and public notice requirements when they transfer to any of the locations covered by this addendum and will only be allowed to stay in the new location for a period of less than 1 year. Also, the conditions and controls of this addendum will keep N.A. Degerstrom from having a significant impact on certain PM_{10} nonattainment areas.

IV. Emission Inventory – Summer and Winter Seasons

Potential To Emit in Pounds Per Day – **Winter Season**
N.A. Degerstrom Inc. – MAQP #4582-01

Source	PM	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_X	VOC
300 TPH Crusher	8.64	3.89	0.13				
300 TPH Screen	15.84	5.33	0.07				
Transfers	1.15	0.53	---				
Piles	53.28	25.20	3.60				
Raw Material Unloading	1.15	0.12	---				
Haul Roads	60.18	16.59	1.66				
Generator Engines	29.92	29.92	29.92	421.60	90.88	27.84	33.60
TOTAL	170.16	81.58	35.38	421.60	90.88	27.84	33.60

Crusher

Maximum Capacity 300 ton/hr (MAQP 4582-00 Application)
Hours of Operation 8760 hrs/yr

PM Emissions

Emissions Factor 0.0012 lb/ton (AP-42 Table 11.19.2-2, 08/2004)
Calculations 0.0012 lb/ton * 300 ton/hr = 0.36 lb/hr
0.36 lb/hr * 24 hr/day = 8.64 lb/day
0.36 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 1.58 ton/yr

PM_{10} Emissions

Emissions Factor 0.00054 lb/ton (AP-42 Table 11.19.2-2, 08/2004)
Calculations 0.00054 lb/ton * 300 ton/hr = 0.16 lb/hr
0.16 lb/hr * 24 hr/day = 3.89 lb/day
0.16 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.71 ton/yr

$PM_{2.5}$ Emissions

Emissions Factor 0.0001 lb/ton (AP-42 Table 11.19.2-2, 08/2004)
Calculations 0.0001 lb/ton * 300 ton/hr = 0.03 lb/hr
0.03 lb/hr * 24 hr/day = 0.72 lb/day
0.03 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.13 ton/yr

Screen

Maximum Capacity 300 ton/hr (MAQP 4582-00 Application)
Hours of Operation 8760 hrs/yr

PM Emissions

Emissions Factor	0.0022 lb/ton (AP-42 Table 11.19.2-2, 08/2004)	
Calculations	0.0022 lb/ton * 300 ton/hr =	0.66 lb/hr
	0.66 lb/hr * 24 hr/day =	15.84 lb/day
	0.66 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	2.89 ton/yr

PM_{10} Emissions

Emissions Factor	0.00074 lb/ton (AP-42 Table 11.19.2-2, 08/2004)	
Calculations	0.00074 lb/ton * 300 ton/hr =	0.22 lb/hr
	0.22 lb/hr * 24 hr/day =	5.28 lb/day
	0.22 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	0.96 ton/yr

$PM_{2.5}$ Emissions

Emissions Factor	0.00005 lb/ton (AP-42 Table 11.19.2-2, 08/2004)	
Calculations	0.00005 lb/ton * 300 ton/hr =	0.015 lb/hr
	0.015 lb/hr * 24 hr/day =	0.36 lb/day
	0.015 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	0.07 ton/yr

Generator Engines

Note: all PM Emissions are assumed to be PM_{10} and $PM_{2.5}$ Emissions

Maximum Capacity	850 hp (MAQP 4582-00 Application)
Hours of Operation	1095 hrs/yr or 3.00 hr/day

PM Emissions

Emissions Factor	0.0022 lb/hp-hr (AP-42 Table 3.3-1, 10/1996)	
Calculations	0.0022 lb/hp-hr * 850 hp =	1.87 lb/hr
	1.87 lb/hr * 16hr/day =	29.92 lb/day
	1.87 lb/hr * 1095 hr/yr * 0.0005 ton/lb =	1.02 ton/yr

NO_x Emissions

Emissions Factor	0.031 lb/hp-hr (AP-42 Table 3.3-1, 10/96)	
Calculations	0.031 lb/hp-hr * 850 hp =	26.35 lb/hr
	26.35 lb/hr * 16 hr/day =	421.60 lb/day
	26.35 lb/hr * 1095 hr/yr * 0.0005 ton/lb =	14.43 ton/yr

VOC Emissions

Emissions Factor	0.00247 lb/hp-hr (AP-42 Table 3.3-1, 10/96)	
Calculations	0.00247 lb/hp-hr * 850 hp =	2.10 lb/hr
	2.10 lb/hr * 16 hr/day =	33.60 lb/day
	2.10 lb/hr * 1095 hr/yr * 0.0005 ton/lb =	1.15 ton/yr

CO Emissions

Emissions Factor	0.00668 lb/hp-hr (AP-42 Table 3.3-1, 10/96)	
Calculations	0.00668 lb/hp-hr * 850 hp =	5.68 lb/hr
	5.68 lb/hr * 16 hr/day =	90.88 lb/day
	5.68 lb/hr * 1095 hr/yr * 0.0005 ton/lb =	3.11 ton/yr

SO_x Emissions

Emissions Factor	0.00205 lb/hp-hr (AP-42 Table 3.3-1, 10/96)	
Calculations	0.00205 lb/hp-hr * 850 hp =	1.74 lb/hr
	1.74 lb/hr * 16 hr/day =	27.84 lb/day
	1.74 lb/hr * 1095 hr/yr * 0.0005 ton/lb =	0.95 ton/yr

Material Transfers (9)

Maximum Capacity	300 ton/hr (MAQP 4582-00 Application)
Hours of Operation	8760 hrs/yr

PM Emissions

Emissions Factor	0.00014 lb/ton (AP-42 Table 11.19.2-2, 08/2004)	
Calculations	0.00014 lb/ton * 300 ton/hr * 9 =	0.38 lb/hr
	0.38 lb/hr * 24 hr/day =	0.91 lb/day
	0.38 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	1.66 ton/yr

PM_{10} Emissions

Emissions Factor	0.000046 lb/ton (AP-42 Table 11.19.2-2, 08/2004)	
Calculations	0.000046 lb/ton * 300 ton/hr * 9 =	0.12 lb/hr
	0.12 lb/hr * 24 hr/day =	2.88 lb/day
	0.12 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	0.53 ton/yr

Truck Unloading (1)

Maximum Capacity	300 ton/hr (MAQP 4582-00 Application)
Hours of Operation	8760 hrs/yr

PM Emissions

Emissions Factor	0.00016 lb/ton (AP-42 Table 11.19.2-2, 08/2004)	
Calculations	0.00016 lb/ton * 300 ton/hr =	0.048 lb/hr
	0.043 lb/hr * 24 hr/day =	1.15 lb/day
	0.043 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	0.15 ton/yr

PM_{10} Emissions

Emissions Factor	0.000016 lb/ton (AP-42 Table 11.19.2-2, 08/2004)	
Calculations	0.000016 lb/ton * 300 ton/hr =	0.0048 lb/hr
	0.0048 lb/hr * 24 hr/day =	0.12 lb/day
	0.0048 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	0.02 ton/yr

Pile Forming

Maximum Capacity	300 ton/hr (MAQP 4582-00 Application)
Hours of Operation	8760 hrs/yr

PM Emissions

Emissions Factor	0.0074 lb/ton (AP-42 Table 11.19.2-2, 08/2004)	
Calculations	0.0074 lb/ton * 300 ton/hr =	2.22 lb/hr
	2.22 lb/hr * 24 hr/day =	53.28 lb/day
	2.22 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	9.7 ton/yr

PM_{10} Emissions

Emissions Factor	0.0035 lb/ton (AP-42 Table 11.19.2-2, 08/2004)	
Calculations	0.0035 lb/ton * 300 ton/hr =	1.05 lb/hr
	1.05 lb/hr * 24 hr/day =	25.20 lb/day
	1.05 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	4.60 ton/yr

$PM_{2.5}$ Emissions

Emissions Factor	0.0005 lb/ton (AP-42 Table 11.19.2-2, 08/2004)	
Calculations	0.0005 lb/ton * 300 ton/hr =	0.15 lb/hr
	0.15 lb/hr * 24 hr/day =	3.6 lb/day
	0.15 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	0.7 ton/yr

Haul Roads

Miles Travelled:	5	Miles/Day [Estimate]
Vehicle Weight:	< 50	Tons

Emission Factor $EF = k(s/12)^{\wedge a} * (W/3)^{\wedge b}$ [AP-42 13.2.2.2, 11/06]

where: EF, Emission Factor = lbs Emitted Per Vehicle Mile Traveled (VMT)

k, Empirical Constant PM =	4.9	[AP-42 Table 13.2.2-2, 11/06]
k, Empirical Constant PM_{10} =	1.5	[AP-42 Table 13.2.2-2, 11/06]
k, Empirical Constant $PM_{2.5}$ =	0.15	[AP-42 Table 13.2.2-2, 11/06]
s, Surface Material Silt Content (%) =	7.1	[AP-42 Table 13.2.2-1, 11/06]
W, Mean Vehicle Weight (tons) =	50	[Provided Data]
a, Empirical Constant PM =	0.7	[AP-42 Table 13.2.2-2, 11/06]
a, Empirical Constant $PM_{10}/PM_{2.5}$ =	0.9	[AP-42 Table 13.2.2-2, 11/06]
b, Empirical Constant PM - $PM_{2.5}$ =	0.45	[AP-42 Table 13.2.2-2, 11/06]

PM Emissions:

Emission Factor	EF = 4.9 * (7.1/12)^0.7 * (50/3)^0.45 =	12.04	lbs/VMT		
Calculations	(12.04 lbs/VMT) * (5 miles/day) =			60.18	lbs/day
	(60.18 lbs/day) * (365 days/yr) * (0.0005 tons/lb) =			10.98	TPY

PM_{10} Emissions:

Emission Factor	EF = 1.5 * (7.1/12)^0.9 * (50/3)^0.45 =	3.32	lbs/VMT		
Calculations	(3.32 lbs/VMT) * (5 miles/day) =			16.59	lbs/day
	(16.59 lbs/day) * (365 days/yr) * (0.0005 tons/lb) =			3.03	TPY

$PM_{2.5}$ Emissions:

Emission Factor	EF = 0.15 * (7.1/12)^0.9 * (50/3)^0.45 =	0.33	lbs/VMT		
Calculations	(0.33 lbs/VMT) * (5 miles/day) =			1.66	lbs/day
	(1.66 lbs/day) * (365 days/yr) * (0.0005 tons/lb) =			0.30	TPY

Potential To Emit in Pounds Per Day – **Summer Season** N.A. Degerstrom Inc. – MAQP #4582-01							
Source	PM	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_X	VOC
300 TPH Crusher	8.64	3.89	0.13				
300 TPH Screen	15.84	5.33	0.07				
Transfers	1.15	0.53	---				
Piles	53.28	25.20	3.60				
Raw Material Unloading	1.15	0.12	---				
Haul Roads	60.18	16.59	1.66				
Generator Engines	5.61	5.61	5.61	79.05	52.13	5.23	6.30
TOTAL	145.85	57.27	11.07	79.05	52.13	5.23	6.30

Crusher

Maximum Capacity 300 ton/hr (MAQP 4582-00 Application)
Hours of Operation 8760 hrs/yr

PM Emissions

Emissions Factor 0.0012 lb/ton (AP-42 Table 11.19.2-2, 08/2004)
Calculations 0.0012 lb/ton * 300 ton/hr = 0.36 lb/hr
0.36 lb/hr * 24 hr/day = 8.64 lb/day
0.36 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 1.58 ton/yr

PM_{10} Emissions

Emissions Factor 0.00054 lb/ton (AP-42 Table 11.19.2-2, 08/2004)
Calculations 0.00054 lb/ton * 300 ton/hr = 0.16 lb/hr
0.16 lb/hr * 24 hr/day = 3.89 lb/day
0.16 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.71 ton/yr

$PM_{2.5}$ Emissions

Emissions Factor 0.0001 lb/ton (AP-42 Table 11.19.2-2, 08/2004)
Calculations 0.0001 lb/ton * 300 ton/hr = 0.03 lb/hr
0.03 lb/hr * 24 hr/day = 0.72 lb/day
0.03 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.13 ton/yr

Screen

Maximum Capacity 300 ton/hr (MAQP 4582-00 Application)
Hours of Operation 8760 hrs/yr

PM Emissions

Emissions Factor 0.0022 lb/ton (AP-42 Table 11.19.2-2, 08/2004)
Calculations 0.0022 lb/ton * 300 ton/hr = 0.66 lb/hr
0.66 lb/hr * 24 hr/day = 15.84 lb/day
0.66 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 2.89 ton/yr

PM_{10} Emissions

Emissions Factor 0.00074 lb/ton (AP-42 Table 11.19.2-2, 08/2004)
Calculations 0.00074 lb/ton * 300 ton/hr = 0.22 lb/hr
0.22 lb/hr * 24 hr/day = 5.28 lb/day
0.22 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.96 ton/yr

$PM_{2.5}$ Emissions

Emissions Factor	0.00005 lb/ton (AP-42 Table 11.19.2-2, 08/2004)	
Calculations	0.00005 lb/ton * 300 ton/hr =	0.015 lb/hr
	0.015 lb/hr * 24 hr/day =	0.36 lb/day
	0.015 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	0.07 ton/yr

Generator Engines

Note: all PM Emissions are assumed to be PM_{10} and $PM_{2.5}$ Emissions

Maximum Capacity	850 hp (MAQP 4582-00 Application)
Hours of Operation	1095 hrs/yr or 3.00 hr/day

PM Emissions

Emissions Factor	0.0022 lb/hp-hr (AP-42 Table 3.3-1, 10/1996)	
Calculations	0.0022 lb/hp-hr * 850 hp =	1.87 lb/hr
	1.87 lb/hr * 3hr/day =	5.61 lb/day
	1.87 lb/hr * 1095 hr/yr * 0.0005 ton/lb =	1.02 ton/yr

NO_x Emissions

Emissions Factor	0.031 lb/hp-hr (AP-42 Table 3.3-1, 10/96)	
Calculations	0.031 lb/hp-hr * 850 hp =	26.35 lb/hr
	26.35 lb/hr * 3 hr/day =	79.05 lb/day
	26.35 lb/hr * 1095 hr/yr * 0.0005 ton/lb =	14.43 ton/yr

VOC Emissions

Emissions Factor	0.00247 lb/hp-hr (AP-42 Table 3.3-1, 10/96)	
Calculations	0.00247 lb/hp-hr * 850 hp =	2.10 lb/hr
	2.10 lb/hr * 3 hr/day =	6.3 lb/day
	2.10 lb/hr * 1095 hr/yr * 0.0005 ton/lb =	1.15 ton/yr

CO Emissions

Emissions Factor	0.00668 lb/hp-hr (AP-42 Table 3.3-1, 10/96)	
Calculations	0.00668 lb/hp-hr * 850 hp =	5.68 lb/hr
	5.68 lb/hr * 3 hr/day =	17.04 lb/day
	5.68 lb/hr * 1095 hr/yr * 0.0005 ton/lb =	3.11 ton/yr

SO_x Emissions

Emissions Factor	0.00205 lb/hp-hr (AP-42 Table 3.3-1, 10/96)	
Calculations	0.00205 lb/hp-hr * 850 hp =	1.74 lb/hr
	1.74 lb/hr * 3 hr/day =	5.23 lb/day
	1.74 lb/hr * 1095 hr/yr * 0.0005 ton/lb =	0.95 ton/yr

Material Transfers (9)

Maximum Capacity	300 ton/hr (MAQP 4582-00 Application)
Hours of Operation	8760 hrs/yr

PM Emissions

Emissions Factor	0.00014 lb/ton (AP-42 Table 11.19.2-2, 08/2004)	
Calculations	0.00014 lb/ton * 300 ton/hr * 9 =	0.38 lb/hr
	0.38 lb/hr * 24 hr/day =	0.91 lb/day
	0.38 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	1.66 ton/yr

PM_{10} Emissions

Emissions Factor	0.000046 lb/ton (AP-42 Table 11.19.2-2, 08/2004)	
Calculations	0.000046 lb/ton * 300 ton/hr * 9 =	0.12 lb/hr
	0.12 lb/hr * 24 hr/day =	2.88 lb/day
	0.12 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	0.53 ton/yr

Truck Unloading (1)

Maximum Capacity	300 ton/hr (MAQP 4582-00 Application)
Hours of Operation	8760 hrs/yr

PM Emissions

Emissions Factor	0.00016 lb/ton (AP-42 Table 11.19.2-2, 08/2004)	
Calculations	0.00016 lb/ton * 300 ton/hr =	0.048 lb/hr
	0.043 lb/hr * 24 hr/day =	1.15 lb/day
	0.043 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	0.15 ton/yr

PM_{10} Emissions

Emissions Factor	0.000016 lb/ton (AP-42 Table 11.19.2-2, 08/2004)	
Calculations	0.000016 lb/ton * 300 ton/hr =	0.0048 lb/hr
	0.0048 lb/hr * 24 hr/day =	0.12 lb/day
	0.0048 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	0.02 ton/yr

Pile Forming

Maximum Capacity	300 ton/hr (MAQP 4582-00 Application)
Hours of Operation	8760 hrs/yr

PM Emissions

Emissions Factor	0.0074 lb/ton (AP-42 Table 11.19.2-2, 08/2004)	
Calculations	0.0074 lb/ton * 300 ton/hr =	2.22 lb/hr
	2.22 lb/hr * 24 hr/day =	53.28 lb/day
	2.22 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	9.7 ton/yr

PM_{10} Emissions

Emissions Factor	0.0035 lb/ton (AP-42 Table 11.19.2-2, 08/2004)	
Calculations	0.0035 lb/ton * 300 ton/hr =	1.05 lb/hr
	1.05 lb/hr * 24 hr/day =	25.20 lb/day
	1.05 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	4.60 ton/yr

$PM_{2.5}$ Emissions

Emissions Factor	0.0005 lb/ton (AP-42 Table 11.19.2-2, 08/2004)	
Calculations	0.0005 lb/ton * 300 ton/hr =	0.15 lb/hr
	0.15 lb/hr * 24 hr/day =	3.6 lb/day
	0.15 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	0.7 ton/yr

Haul Roads

Miles Travelled:	5	Miles/Day [Estimate]			
Vehicle Weight:	< 50	Tons			
Emission Factor	$EF = k(s/12)^{\wedge a} * (W/3)^{\wedge b}$		[AP-42 13.2.2.2, 11/06]		
	where: EF, Emission Factor = lbs Emitted Per Vehicle Mile Traveled (VMT)				
	k, Empirical Constant PM =	4.9	[AP-42 Table 13.2.2-2, 11/06]		
	k, Empirical Constant PM_{10} =	1.5	[AP-42 Table 13.2.2-2, 11/06]		
	k, Empirical Constant $PM_{2.5}$ =	0.15	[AP-42 Table 13.2.2-2, 11/06]		
	s, Surface Material Silt Content (%) =	7.1	[AP-42 Table 13.2.2-1, 11/06]		
	W, Mean Vehicle Weight (tons) =	50	[Provided Data]		
	a, Empirical Constant PM =	0.7	[AP-42 Table 13.2.2-2, 11/06]		
	a, Empirical Constant $PM_{10}/PM_{2.5}$ =	0.9	[AP-42 Table 13.2.2-2, 11/06]		
	b, Empirical Constant PM - $PM_{2.5}$ =	0.45	[AP-42 Table 13.2.2-2, 11/06]		
PM Emissions:					
Emission Factor	EF = 4.9 * (7.1/12)^0.7 * (50/3)^0.45 =	12.04	lbs/VMT		
Calculations	(12.04 lbs/VMT) * (5 miles/day) =			60.18	lbs/day
	(60.18 lbs/day) * (365 days/yr) * (0.0005 tons/lb) =			10.98	TPY
PM_{10} Emissions:					
Emission Factor	EF = 1.5 * (7.1/12)^0.9 * (50/3)^0.45 =	3.32	lbs/VMT		
Calculations	(3.32 lbs/VMT) * (5 miles/day) =			16.59	lbs/day
	(16.59 lbs/day) * (365 days/yr) * (0.0005 tons/lb) =			3.03	TPY
PM_{10} Emissions:					
Emission Factor	EF = 0.15 * (7.1/12)^0.9 * (50/3)^0.45 =	0.33	lbs/VMT		
Calculations	(0.33 lbs/VMT) * (5 miles/day) =			1.66	lbs/day
	(1.66 lbs/day) * (365 days/yr) * (0.0005 tons/lb) =			0.30	TPY

V. Existing Air Quality

On July 1, 1987, the Environmental Protection Agency (EPA) promulgated new National Ambient Air Quality Standards (NAAQS) for particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}). Due to exceedances of the national standards for PM_{10}, the cities of Kalispell (and the nearby Evergreen area), Columbia Falls, Butte, Whitefish, Libby, Missoula, and Thompson Falls were designated by EPA as nonattainment for PM_{10}. As a result of this designation, the EPA required the Department and the City-County Health Departments to submit PM_{10} State Implementation Plans (SIP). The SIPs consisted of emission control plans that controlled fugitive dust emissions from roads, parking lots, construction, and demolition, since technical studies identified these sources to be the major contributors to PM_{10} emissions.

MAQP #4582-01 and Addendum 1 are for a portable crushing/screening plant that will locate at sites in or within 10 kilometers (km) of certain PM_{10} nonattainment areas. The more stringent operating conditions contained in the addendum will minimize any potential impact on the nonattainment areas and will protect the national ambient air quality standards. Also, this facility is a portable source that would be expected to operate on an intermittent and temporary basis and any effects on air quality would be expected to be minor and short-lived.

VI. Air Quality Impacts

MAQP #4582-01 and Addendum 1 will cover the operations of this portable crushing/screening plant while operating at any location within Montana, excluding those counties that have a Department approved permitting program and those areas that are tribal lands.

Addendum 1 will cover the operations of this portable crushing/screening plant while operating in or within 10 km of PM_{10} nonattainment area during the winter months (October 1 through March 31). Additionally, the facility will also be allowed to operate in or within 10 km of certain PM_{10} nonattainment areas during the summer months (April 1 through September 30).

VII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, MCA, the Department conducted the following private property taking and damaging assessment (see Section VII of the Permit Analysis for MAQP #4582-01) and determined there are no taking or damaging implications.

VIII. Environmental Assessment

An environmental assessment was not required for the current permit action because it is considered an administrative action.

Analysis prepared by: Julie Merkel
Date: May 4, 2011