



Montana Department of  
**E**NVIRONMENTAL **Q**UALITY

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June 8, 2012

Justin Sherman  
LaSalle Sand and Gravel  
175 Jellison Road  
Kalispell, MT 59901

Dear Mr. Sherman:

Montana Air Quality Permit #3289-02 is deemed final as of June 8, 2012, by the Department of Environmental Quality (Department). This permit is for a natural gas compressor station. 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

Tashia Love  
Environmental Science Specialist  
Air Resources Management Bureau  
(406) 444-5280

VW:TL  
Enclosure

Montana Department of Environmental Quality  
Permitting and Compliance Division

Montana Air Quality Permit #3289-02

LaSalle Sand and Gravel  
175 Jellison Road  
Kalispell, MT 59901

June 8, 2012



## MONTANA AIR QUALITY PERMIT

Issued To: LaSalle Sand and Gravel, Inc.  
175 Jellison Road  
Kalispell, MT. 59901

Permit: #3289-02  
Administrative Amendment (AA) Request  
Received: 05/11/2012  
Department's Decision on AA Issued: 05/23/2012  
Permit Final: June 8, 2012  
AFS #777-3289

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to LaSalle Sand and Gravel, Inc. (LaSalle) 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. Plant Location

LaSalle operates a portable crushing and screening operation that was initially located in Section 36, Township 30 North, Range 21 West, in Flathead County, Montana. However, MAQP #3289-02 applies while operating at any location in Montana, except within those areas having a Department of Environmental Quality (Department) approved permitting program, those areas considered 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. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.*

Addendum #2 will apply to the LaSalle facility while operating at locations in or within 10 km of certain PM<sub>10</sub> nonattainment areas during the summer months (April 1 – September 30) and sites approved by the Department during the winter months (October 1 – March 31). A complete list of the permitted equipment is contained in Section I.A of the permit analysis.

#### B. Current Permit Action

On May 11, 2012, the Department received a request from LaSalle to update permit language to reflect current equipment being operated at the crushing/screening facility. LaSalle operates up to two diesel-fired generator engines with a maximum capacity of 1,095 horsepower. In addition, the permit updates the rule references, permit format, and emission inventory.

### 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 water spray bars shall be available on site at all times and used, as necessary, to maintain compliance with the opacity limitation in Section II.A.1, II.A.2, and II.A.3 (ARM 17.8.749 and ARM 17.8.752).
5. LaSalle 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. LaSalle 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 and ARM 17.8.752).
7. LaSalle shall not operate more than two crushers at any given time and the total combined maximum rated design capacity of the crushers shall not exceed 300 tons per hour (TPH) (ARM 17.8.749).
8. LaSalle shall not operate more than one screen at any given time and the total maximum rated design capacity of the screen shall not exceed 150 TPH (ARM 17.8.749).
9. LaSalle shall not operate, or have on-site, more than two diesel-fired generator engines. The maximum combined capacity of the engines that drive the generator shall not exceed 1,095 hp (ARM 17.8.749 and ARM 17.8.1204).
10. Operation of the diesel-fired engines driving the generator shall not exceed 4,700 hours during any rolling 12-month time period (ARM 17.8.749 and ARM 17.8.1204).
11. If the permitted equipment is used in conjunction with any other equipment owned or operated by LaSalle 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).
12. LaSalle shall comply with all applicable standards and limitations, and the reporting, recordkeeping, testing, and notification requirements contained in 40 Code of Federal Regulations (CFR) 60, Subpart OOO (ARM 17.8.340 and 40 CFR 60, Subpart OOO).

13. LaSalle 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-fired engine (ARM 17.8.340; 40 CFR 60, Subpart IIII; ARM 17.8.342 and 40 CFR 63, Subpart ZZZZ).

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 further 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. LaSalle 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 LaSalle 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. LaSalle 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 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 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. LaSalle shall notify the Department of any construction or improvement project conducted, pursuant to ARM 17.8.745, that would include ***the addition of a new emissions unit***, change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation. The notice must be submitted to the Department, in writing, 10 days prior to startup or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).

5. LaSalle shall document, by month, the total crushing production for the facility. By the 25th day of each month, LaSalle shall calculate the crushing production for the previous month. The monthly information will be used to demonstrate compliance with the rolling 12-month 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).
6. LaSalle shall document, by month, the total screening production for the facility. By the 25th day of each month, LaSalle shall calculate the screening production during the previous month. 12 months to verify compliance with the limitation in Section II.A.10. A written report of the compliance verification shall be submitted along with the annual emission inventory (ARM 17.8.749).
7. LaSalle shall document, by month, the hours of operation of the diesel-fired engine generators. By the 25th day of each month, LaSalle shall calculate the hours of operation for the diesel-fired engine generators for the previous month. The monthly information will be used to demonstrate compliance with the rolling 12-month limitation in Section II.A.12. A written report of the compliance verification shall be submitted along with the annual emission inventory (ARM 17.8.749).
8. LaSalle shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit as required by ARM 17.8.1204(3)(b). The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted with the annual emissions inventory information (ARM 17.8.749 and ARM 17.8.1204).

### SECTION III: General Conditions

- A. Inspection – LaSalle 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 LaSalle fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving LaSalle 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 LaSalle 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. LaSalle 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 land.

Montana Air Quality Permit (MAQP) Analysis  
LaSalle Sand and Gravel, Inc.  
MAQP #3289-02

I. Introduction/Process Description

A. Permitted Equipment

LaSalle Sand and Gravel, Inc. (LaSalle) own and operates a portable crushing/screening facility which consists of up to two diesel-fired engines of a total combined maximum rate design capacity of 1,095 horsepower (hp), two crushers with a total combined maximum rate design capacity of 300 tons per hours (TPH), and a screen with a total maximum rated design capacity of 150 TPH.

B. Source Description

LaSalle operates this facility 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 via a hopper and transferred by conveyor to the crushers. Crushed materials are then conveyed to the screen where materials are screened, separated, and piled.

C. Permit History

On November 26, 2003, LaSalle submitted the initial permit application to operate a portable 1975 (21"x48") Pioneer Jaw crusher (maximum capacity up to 150 TPH), a 1975 (54") El Jay Cone crusher (maximum capacity up to 150 TPH), a 1975 (5'x16') 2-deck screen (up to 150 TPH), a 700 kilowatts (kW) diesel-fired generator, and associated equipment. LaSalle was issued was **MAQP #3289-00**.

The original location for the facility was proposed for Section 36, Township 30 North, Range 21 West, in Flathead County, Montana.

This permit action changed permit language specific to the rating of diesel-fired generators from rated output of the generator in kW to size of engine powering the generator in hp. Additionally, the emission inventory was updated in this action to incorporate relevant changes to emission factors and estimation techniques. The permit was also updated to reflect current language and rule references used by the Department of Environmental Quality (Department), as well as update the emission inventory. **MAQP #3289-01** replaced MAQP #3289-00.

D. Current Permit Action

On May 11, 2012, the Department received a request from LaSalle to update permit language to reflect current equipment being operated at the crushing/screening facility. LaSalle operates up to two diesel-fired generator engines with a maximum capacity of 1,095 horsepower. In addition, the permit updates the rule references, permit format, and emission inventory. **MAQP #3289-02** replaces MAQP #3289-01.

E. Additional Information

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

## 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 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 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).

LaSalle 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 Monitoring
2. Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide (CO)
5. ARM 17.8.211 Ambient Air Quality Standards for Ozone
6. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter (PM)
7. ARM 17.8.220 Ambient Air Quality Standard for Visibility
8. ARM 17.8.223 Ambient Air Quality Standard for Particulate Matter with an Aerodynamic Diameter of 10 Microns or Less (PM<sub>10</sub>)

LaSalle 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, LaSalle shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.
  3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this section.
  4. ARM 17.8.310 Particulate Matter, Industrial Processes. This rule requires that no person shall cause or allow 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 Standards of Performance for New Stationary Sources. This rule incorporates, by reference, 40 Code of Federal Regulations (CFR) 60, Standards of Performance for New Stationary Sources (NSPS). Based on the information submitted by LaSalle the portable crushing/screening operation and associated equipment is applicable to NSPS (40 CFR 60), as follows:
    - 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/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 LaSalle, at the time of issuance of MAQP #3289-02, the crushing/screening equipment to be used is not subject to NSPS, Subpart OOO requirements because the maximum capacity of each facility does not exceed 150 TPH. However, this permit is written de minimis friendly; therefore, LaSalle may substitute equipment and applicability to this subpart is dependent upon the date of construction, and the size of the equipment utilized.

- c. 40 CFR 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition (CI) Internal Combustion Engines (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 LaSalle, the CI ICE equipment permitted under MAQP #3289-02 is not subject to this subpart as the CI ICE was manufactured prior to April 1, 2006. This permit is written in a de minimis friendly manner which allows substitution of the diesel-fired engine generators as long as the maximum rated design capacity does not exceed 1,095 hp. Therefore, the provisions of this subpart are potentially applicable depending upon the CI ICE utilized.

8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The source, as defined and applied in 40 CFR Part 63, shall comply with the requirements of 40 CFR Part 63, as listed below:
  - a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to an NESHAP Subpart as listed below:
  - b. 40 CFR 63, Subpart ZZZZ – NESHAPs for Stationary Reciprocating Internal Combustion Engines (RICE). An owner or operator of a stationary RICE at a major or area source of HAP emissions is subject to this rule except if the stationary RICE is being tested at a stationary RICE test cell/stand. An area source of HAP emissions is a source that is not a major source.

Based on the information submitted by LaSalle, the RICE equipment to be used under MAQP #3289-02 may be subject to this subpart as the facility is an area source of HAP emissions and the engines may meet the definition of a stationary RICE if they remain in a location for more than 12 months.

- D. ARM 17.8, Subchapter 5 - Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:
  1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that LaSalle 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. A permit fee is not required for the current permit action because the action is considered an administrative change.
  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 alteration to construct, modify, or use any asphalt plant, crusher, or screen that has the Potential to Emit (PTE) greater than 15 tons per year of any pollutant. LaSalle has a PTE greater than 15 tons per year for PM, PM<sub>10</sub>, oxides of nitrogen (NO<sub>x</sub>), and CO; therefore, an air quality permit is required.
  3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit Program.
  4. ARM 17.8.745 Montana Air Quality Permits—Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
  5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. A permit application was not required for the current permit action because the action is considered an administrative change. (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. An affidavit of publication of public notice was not required for the current permit action because the action is considered an administrative change.
  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 LaSalle 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, and 10.
14. ARM 17.8.765 Transfer of Permit. (1) This rule states that an air quality permit may be transferred from one location to another if the Department receives a complete notice of Intent to Transfer location, the facility will operate in the new location for less than 1 year, the facility will comply with the FCAA and the Clean Air Act of Montana, and the facility complies with other applicable rules. (2) This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

F. ARM 17.8, 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 PTE is less than 250 tons per year (tpy) (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 tpy of any pollutant;
  - b. PTE > 10 tpy 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 tpy of PM<sub>10</sub> in a serious PM<sub>10</sub> nonattainment area.
  
2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (1) Title V of the FCAA Amendments of 1990, requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing MAQP #3289-02 for LaSalle, the following conclusions were made:
  - a. LaSalle requested federally enforceable permit conditions that will limit the facility's PTE to less than 100 tpy of any pollutant.
  - b. The facility's PTE is less than 10 tpy 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 potentially subject to the area source provisions of a current NESHAP standard (40 CFR 63, Subpart ZZZZ).
  - e. This facility is potentially subject to current NSPS standards (40 CFR 60, Subpart OOO and Subpart IIII).
  - 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.

LaSalle 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 source 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 required 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 any new or modified source. LaSalle 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.

A BACT determination was not required for the current permit action because the permit change is considered an administrative permit change.

### IV. Emission Inventory

Emission Source	Emissions Tons/Year [PTE] <sup>(b)</sup>						
	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	CO	NO <sub>x</sub>	SO <sub>2</sub>	VOC
1975 Pioneer Jaw Crusher	0.79	0.35	0.07				
1994 El Jay Cone Crusher	0.79	0.35	0.07				
2006 Cedar Rapids 6'x16'3 Deck Screen	1.45	0.49	0.03				
Material Handling	6.09	2.87	0.65				
Diesel-fired Engine Generators (1095 hp maximum) <sup>(a)</sup>	5.66	5.66	1.14	17.19	79.77	5.28	6.47
Unpaved Roadways (Haul Roads)	10.98	3.03	0.30				
<b>TOTAL EMISSIONS [TPY] ▶</b>	<b>25.76</b>	<b>12.76</b>	<b>2.12</b>	<b>17.19</b>	<b>79.77</b>	<b>5.28</b>	<b>6.47</b>
<p>(a). Emission Inventory reflects enforceable limits on hours of operation to keep allowable emissions below the Title V threshold <u>AND</u> 80 tpy.</p> <p>(b) PM, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions presented in the table represent the sum of the filterable and condensable particulate matter (CPM) fractions. All CPM is considered to be PM<sub>2.5</sub>.</p> <p>CO, carbon monoxide            NO<sub>x</sub>, oxides of nitrogen            PM, particulate matter            PM<sub>10</sub>, particulate matter with an aerodynamic diameter of 10 microns or less            PM<sub>2.5</sub>, particulate matter with an aerodynamic diameter of 2.5 microns or less            PM<sub>cond</sub>, condensable particulate matter            SO<sub>2</sub>, oxides of sulfur            TPY, tons per year            VOC, volatile organic compounds</p>							

#### Portable Crushing & Screening Plant

Production Rate:

Crushers	300 tons/hour (Maximum)	2628000 tons/year (Maximum)
Deck Screen	150 tons/hour (Maximum)	1314000 tons/year (Maximum)

Power Plant: 1095 hp

#### Material Processing:

**Pioneer Jaw Crusher [SCC 3-05-030-03]**

Process Rate: 150 tons/hour  
Operating Hours: 8760 hours/year

**Particulate Emissions:**

PM Emissions (controlled):

Emission Factor 0.0012 lbs/ton processed [AP-42 Table 11.19.2-2, 8/04]  
Calculations (0.0012 lbs/ton) \* (150 tons/hr) = 0.18 lbs/hr  
(0.18 lbs/hr) \* (8760 hrs/yr) \* (0.0005 tons/lb) = 0.79 TPY

PM<sub>10</sub> Emissions (controlled):

Emission Factor 0.00054 lbs/ton processed [AP-42 Table 11.19.2-2, 8/04]  
Calculations (0.00054 lbs/ton) \* (150 tons/hr) = 0.08 lbs/hr  
(0.081 lbs/hr) \* (8760 hrs/yr) \* (0.0005 tons/lb) = 0.35 TPY

PM<sub>2.5</sub> Emissions (controlled):

Emission Factor 0.0001 lbs/ton processed [AP-42 Table 11.19.2-2, 8/04]  
Calculations (0.0001 lbs/ton) \* (150 tons/hr) = 0.02 lbs/hr  
(0.015 lbs/hr) \* (8760 hrs/yr) \* (0.0005 tons/lb) = 0.07 TPY

**El Jay Cone Crusher [SCC 3-05-030-03]**

Process Rate: 150 tons/hour  
Operating Hours: 8760 hours/year

**Particulate Emissions:**

PM Emissions (controlled):

Emission Factor 0.0012 lbs/ton processed [AP-42 Table 11.19.2-2, 8/04]  
Calculations (0.0012 lbs/ton) \* (150 tons/hr) = 0.18 lbs/hr  
(0.18 lbs/hr) \* (8760 hrs/yr) \* (0.0005 tons/lb) = 0.79 TPY

PM<sub>10</sub> Emissions (controlled):

Emission Factor 0.00054 lbs/ton processed [AP-42 Table 11.19.2-2, 8/04]  
Calculations (0.00054 lbs/ton) \* (150 tons/hr) = 0.08 lbs/hr  
(0.081 lbs/hr) \* (8760 hrs/yr) \* (0.0005 tons/lb) = 0.35 TPY

PM<sub>2.5</sub> Emissions (controlled):

Emission Factor 0.0001 lbs/ton processed [AP-42 Table 11.19.2-2, 8/04]  
Calculations (0.0001 lbs/ton) \* (150 tons/hr) = 0.02 lbs/hr  
(0.015 lbs/hr) \* (8760 hrs/yr) \* (0.0005 tons/lb) = 0.07 TPY

**Cedar Rapids Deck Screen [SCC 3-05-020-02,03]**

Process Rate: 150 tons/hour  
Operating Hours: 8760 hours/year

**Particulate Emissions:**

PM Emissions (controlled):

Emission Factor 0.0022 lbs/ton processed [AP-42 Table 11.19.2-2, 8/04]

Calculations	$(0.0022 \text{ lbs/ton}) * (150 \text{ tons/hr}) =$	0.33	lbs/hr
	$(0.33 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$	1.45	TPY

PM<sub>10</sub> Emissions (controlled):

Emission Factor	0.00074 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]	
Calculations	$(0.00074 \text{ lbs/ton}) * (150 \text{ tons/hr}) =$	0.11	lbs/hr
	$(0.111 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$	0.49	TPY

PM<sub>2.5</sub> Emissions (controlled):

Emission Factor	0.00005 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]	
Calculations	$(0.00005 \text{ lbs/ton}) * (150 \text{ tons/hr}) =$	0.01	lbs/hr
	$(0.0075 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$	0.03	TPY

**Material Handling:**

**Fragmented Stone Load-In ► Crushers [SCC 3-05-020-31]**

Process Rate:	300 tons/hour	[2 Crushers]
Operating Hours:	8760 hours/year	

**Particulate Emissions:**

PM Emissions:

Emission Factor	0.00016 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]	
Calculations	$(0.00016 \text{ lbs/ton}) * (300 \text{ tons/hr}) =$	0.05	lbs/hr
	$(0.048 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$	0.21	TPY

PM<sub>10</sub> Emissions:

Emission Factor	0.00016 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]	
Calculations	$(0.00016 \text{ lbs/ton}) * (300 \text{ tons/hr}) =$	0.05	lbs/hr
	$(0.048 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$	0.21	TPY

PM<sub>2.5</sub> Emissions:

Emission Factor	0.00016 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]	
Calculations	$(0.00016 \text{ lbs/ton}) * (300 \text{ tons/hr}) =$	0.05	lbs/hr
	$(0.048 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$	0.21	TPY

**Conveyor Transfer Points [SCC 3-05-020-06]**

Process Rate:	150 tons/hour
Operating Hours:	8760 hours/year
Total Transfers:	9 Transfers [2 Crushers & 1 Screen - Based on Process Flow Diagram]

**Particulate Emissions:**

PM Emissions (controlled):

Emission Factor	0.00014 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]	
Calculations	$(0.00014 \text{ lbs/ton}) * (150 \text{ tons/hr}) * (9 \text{ Transfers}) =$	0.19	lbs/hr
	$(0.189 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$	0.83	TPY

PM<sub>10</sub> Emissions (controlled):

Emission Factor	0.000046 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]	
Calculations	$(0.000046 \text{ lbs/ton}) * (150 \text{ tons/hr}) * (9 \text{ Transfers}) =$	0.06	lbs/hr

$$(0.062 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 0.27 \text{ TPY}$$

**PM<sub>2.5</sub> Emissions (controlled):**

Emission Factor	0.000013 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]	
Calculations	$(0.000013 \text{ lbs/ton}) * (150 \text{ tons/hr}) * (9 \text{ Transfers}) =$		0.02 lbs/hr
	$(0.018 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$		0.08 TPY

**Storage Pile Load-In & Load-Out**

Process Rate:	150 tons/hour	[1 Screener]
Operating Hours:	8760 hours/year	
Pile Transfers:	2	[Initial Pile Formation; Pile Load-Out to Trucks]

**Particulate Emissions:**

Emission Factor	$EF = k (0.0032) * [(U/5)^{1.3} / (M/2)^{1.4}]$	[AP-42 13.2.4, 11/06]
where:	EF, Emission Factor = lbs Emitted / ton Processed	
	k, Dimensionless Particle Size Multiplier PM =	0.74 [AP-42 13.2.4, 11/06]
	k, Dimensionless Particle Size Multiplier PM <sub>10</sub> =	0.35 [AP-42 13.2.4, 11/06]
	k, Dimensionless Particle Size Multiplier PM <sub>2.5</sub> =	0.053 [AP-42 13.2.4, 11/06]
	U, Mean Wind Speed (mph) =	9.3 [ASOS/AWOS AVE-MT 10 yr Ave.]
	M, Material Moisture Content (%) =	2.53 [AP-42 13.2.4.3, 11/06]

**PM Emissions:**

Emission Factor	$EF = 0.74 * (0.0032) * [(9.33/5)^{1.3} / (2.525/2)^{1.4}] =$	0.0038 lbs/ton
Calculations	$(0.0038 \text{ lbs/ton}) * (150 \text{ tons/hr}) * (2 \text{ pile transfers}) =$	1.15 lbs/hr
	$(1.15 \text{ lbs/hr}) * (8760 \text{ hours/yr}) * (0.0005 \text{ tons/lb}) =$	5.05 TPY

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

Emission Factor	$EF = 0.35 * (0.0032) * [(9.33/5)^{1.3} / (2.525/2)^{1.4}] =$	0.0018 lbs/ton
Calculations	$(0.0018 \text{ lbs/ton}) * (150 \text{ tons/hr}) * (2 \text{ piles}) =$	0.55 lbs/hr
	$(0.55 \text{ lbs/hr}) * (8760 \text{ hours/yr}) * (0.0005 \text{ tons/lb}) =$	2.39 TPY

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

Emission Factor	$EF = 0.053 * (0.0032) * [(9.33/5)^{1.3} / (2.525/2)^{1.4}] =$	0.0003 lbs/ton
Calculations	$(0.0003 \text{ lbs/ton}) * (150 \text{ tons/hr}) * (2 \text{ piles}) =$	0.08 lbs/hr
	$(0.08 \text{ lbs/hr}) * (8760 \text{ hours/yr}) * (0.0005 \text{ tons/lb}) =$	0.36 TPY

**Diesel Engines:**

Engine Rating:	1095 hp
Fuel Input:	7.67 MMBtu/hr
	55.9 gallons/hour [Estimated]
Hours of Operation:	4700 hours/year

**Particulate Emissions:**

## PM Emissions:

Emission Factor	0.0022 lb/hp-hr	[AP-42 3.3-1, 10/96 ]	2.41 lbs/hr
Calculations	(0.0022 lb/hp-hr) * (1095 hp) =		5.66 TPY
	(2.41 lbs/hr) * (4700 hrs/yr) * (0.0005 tons/lb) =		

PM<sub>10</sub> Emissions:

Emission Factor	0.0022 lb/hp-hr	[AP-42 3.3-1, 10/96 ]	2.41 lbs/hr
Calculations	(0.0022 lb/hp-hr) * (1095 hp) =		5.66 TPY
	(2.41 lbs/hr) * (4700 hrs/yr) * (0.0005 tons/lb) =		

PM<sub>2.5</sub> Emissions:

Emission Factor	0.0479 lb/MMBtu	[AP-42 3.4-2, 10/96 ]	0.37 lbs/hr
Calculations	(0.0479 lb/MMBtu) * (7.67 MMBtu/hr) =		0.86 TPY
	(0.37 lbs/hr) * (4700 hrs/yr) * (0.0005 tons/lb) =		

PM<sub>cond</sub> Emissions:

Emission Factor	0.0077 lb/MMBtu	[AP-42 3.4-2, 10/96 ]	0.06 lbs/hr
Calculations	(0.0077 lb/MMBtu) * (7.665 MMBtu/hr) =		0.14 TPY
	(0.06 lbs/hr) * (4700 hrs/yr) * (0.0005 tons/lb) =		

**CO Emissions:**

Emission Factor	0.00668 lb/hp-hr	[AP-42 3.3-1, 10/96 ]	7.31 lbs/hr
Calculations	(0.00668 lb/hp-hr) * (1095 hp) =		17.19 TPY
	(7.31 lbs/hr) * (4700 hrs/yr) * (0.0005 tons/lb) =		

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

Emission Factor	0.031 lb/hp-hr	[AP-42 3.3-1, 10/96 ]	33.95 lbs/hr
Calculations	(0.031 lb/hp-hr) * (1095 hp) =		79.77 TPY
	(33.95 lbs/hr) * (4700 hrs/yr) * (0.0005 tons/lb) =		

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

Emission Factor	0.00205 lb/hp-hr	[AP-42 3.3-1, 10/96 ]	2.24 lbs/hr
Calculations	(0.0021 lb/hp-hr) * (1095 hp) =		5.28 TPY
	(2.24 lbs/hr) * (4700 hrs/yr) * (0.0005 tons/lb) =		

**VOC Emissions:**

Emission Factor	0.002514 lb/hp-hr	[AP-42 3.3-1, 10/96 ]	2.75 lbs/hr
Calculations	(0.0025 lb/hp-hr) * (1095 hp) =		6.47 TPY
	(2.75 lbs/hr) * (4700 hrs/yr) * (0.0005 tons/lb) =		

**Unpaved Roadways (Haul Roads)**

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

Emission Factor	EF = $k(s/12)^a * (W/3)^b$	[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 <sub>10</sub> = 1.5	[AP-42 Table 13.2.2-2, 11/06]

k, Empirical Constant PM <sub>2.5</sub> =	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 <sub>10</sub> /PM <sub>2.5</sub> =	0.9	[AP-42 Table 13.2.2-2, 11/06]
b, Empirical Constant PM - PM <sub>2.5</sub> =	0.45	[AP-42 Table 13.2.2-2, 11/06]

PM Emissions:

Emission Factor	EF = 4.9 * (7.1/12) <sup>0.7</sup> * (50/3) <sup>0.45</sup> =	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<sub>10</sub> Emissions:

Emission Factor	EF = 1.5 * (7.1/12) <sup>0.9</sup> * (50/3) <sup>0.45</sup> =	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<sub>10</sub> Emissions:

Emission Factor	EF = 0.15 * (7.1/12) <sup>0.9</sup> * (50/3) <sup>0.45</sup> =	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

The initial location of this portable operation is to be located in an area designated as nonattainment for PM<sub>10</sub> and attainment or unclassified for all other National Ambient Air Quality Standards.

The operating conditions contained in MAQP #3289-02 and Addendum #2 will minimize the potential impact on the nonattainment areas and will protect the national ambient air quality standards (NAAQS).

VI. Ambient Air Quality Impact

MAQP #3289-02 regulates the crushing/screening plant while operating at any location within Montana, excluding those counties that have a Department-approved permitting program. In the view of the Department, the allowable emissions generated by this facility are not expected to exceed any set ambient standard. In addition, this source is portable and any air quality impacts are expected to be minimal and short-lived.

If the source locates and operates in or within 10 km of a PM<sub>10</sub> nonattainment area, LaSalle will be required to operate in accordance with MAQP #3289-02 and Addendum #2, which includes more stringent limits and conditions to ensure that the proposed operation does not result in additional degradation of air quality in the affected nonattainment area. A more detailed discussion and analysis of ambient impacts from operations locating in or within 10 km of certain PM<sub>10</sub> nonattainment areas is contained in the Addendum Analysis to Addendum #2 of MAQP #3289-02.

VII. Ambient Air Impact Analysis

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 on any ambient air quality

standard.

### VIII. Taking or Damaging Implication Analysis

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

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

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

### IX. Environmental Assessment

This permitting action will not result in an increase of emissions from the facility and is considered an administrative action; therefore, an environmental assessment is not required.

Addendum #2  
LaSalle Sand and Gravel, LLC  
Montana Air Quality Permit (MAQP) #3289-02

An addendum to MAQP #3289-02 is issued to LaSalle Sand and Gravel, LLC (LaSalle), 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:

I. Permitted Equipment

LaSalle owns and operates a portable non-metallic mineral processing operation consisting of two crushers with a maximum capacity of 150 tons per hour (TPH) each, a 2 deck screen with a maximum capacity of 150 TPH, two diesel-fired engine generators with a total combined maximum capacity of 1,095 horsepower (hp), associated material handling (material handling conveyors/stackers), and processing equipment.

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

Addendum #2 applies to the LaSalle facility while operating at any location in or within 10 km of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) nonattainment areas. Additionally, seasonal and site restrictions apply to the facility as follows:

- A. During the winter season (October 1-March 31) - The only location in or within 10 km of a PM<sub>10</sub> nonattainment area where LaSalle may operate is:
1. Section 36, Township 30 North, Range 21 West, in Flathead County, Montana; and
  2. Any other site that may be approved, in writing, by the Department of Environmental Quality (Department).
- B. During the summer season (April 1- September 30) – LaSalle may operate at any location in or within 10 kilometers of the Butte, Columbia Falls, Kalispell, Libby, Thompson Falls, and Whitefish PM<sub>10</sub> nonattainment areas.
- C. LaSalle shall comply with the limitations and conditions contained in Addendum #2 to MAQP #3289-02 while operating in or within 10 km of any of the previously identified PM<sub>10</sub> nonattainment areas. Addendum #2 shall be valid until revoked or modified. The Department reserves the authority to modify Addendum #2 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 Requirements – **Summer Season**

1. Water spray bars must be available and operated, as necessary, on the crushers, screens, and all transfer points whenever the crushing/screening plant is in operation (ARM 17.8.749 and ARM 17.8.752).
2. LaSalle shall not cause or authorize to be discharged into the atmosphere from any equipment, such as screens or transfer points, any visible emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM

17.8.749). For NSPS-affected equipment constructed after April 22, 2008, for which an opacity limitation of 7% applies (such as screens and conveyors), that 7% limit shall apply to the affected equipment (ARM17.8.340 and 40 CFR 60, Subpart OOO).

3. LaSalle 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).
4. LaSalle 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 and ARM 17.8.752).
5. LaSalle shall not operate, or have on-site, more than two crushers at any one time. Total crusher production shall not exceed 7,200 tons per day (ARM 17.8.749).
6. LaSalle shall not operate, or have on-site, more than one screen at any one time. Total screen production shall not exceed 3,600 tons per day (ARM 17.8.749).
7. LaSalle shall not operate, or have on-site, more than two diesel-fired engine generators. The total combined maximum capacity of the engines that drive the generators shall not exceed 1,095 hp (ARM 17.8.749).

**B. Operational Requirements – Winter Season**

1. Water spray bars must be available and operated, as necessary, on the crushers, screens, and all transfer points whenever the crushing/screening plant is in operation (ARM 17.8.749 and ARM 17.8.752).
2. LaSalle shall not cause or authorize to be discharged into the atmosphere from any equipment, such as screens or transfer points, any visible emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749). For NSPS-affected equipment constructed after April 22, 2008, for which an opacity limitation of 7% applies (such as screens and conveyors), that 7% limit shall apply to the affected equipment (ARM17.8.340 and 40 CFR 60, Subpart OOO).
3. LaSalle 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).
4. LaSalle 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 and ARM 17.8.752).
5. LaSalle shall not operate, or have on-site, more than two crushers at any one time. Total crusher production shall not exceed 6,000 tons per day (ARM 17.8.749).
6. LaSalle shall not operate, or have on-site, more than one screen at any one time. Total screen production shall not exceed 3,000 tons per day (ARM 17.8.749).

7. LaSalle shall not operate, or have on site, more than two diesel-fired engine generators. The total combined maximum capacity of the engines that drives the generators shall not exceed 1,095 horsepower (hp) (ARM 17.8.749).
8. Operation of the diesel-fired engines driving the generator shall not exceed 20 hours per day (ARM 17.8.749).

C. Operational Reporting Requirements

1. If this 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 five years and submitted to the Department upon request. The information must include (ARM 17.8.749):
  - a. Daily tons of material crushed by each crusher at each site (including amount of re-circulated/rerun material). LaSalle shall document, by day, the total crushing production. LaSalle shall sum the total crushing production for the previous day to demonstrate compliance with the limitations in Sections III.A.5 and III.B.5.
  - b. Daily tons of material screened by each screen at each site (including amount of re-circulated/rerun material). LaSalle shall document, by day, the total screening production. LaSalle shall sum the total screening production for the previous day to demonstrate compliance with the limitations in Sections III.A.6 and III.B.6.
  - c. Daily hp of each diesel-fired engine powering the crushing/screening operation to demonstrate compliance with the limitations in Section III.A.7 and III.B.7.
  - d. Daily operating hours from each diesel-fired engine powering the crushing/screening operation. LaSalle shall document, by day, the total hours of operation. LaSalle shall sum the total operating hours for each diesel-fired engine for the previous day to demonstrate compliance with the limitations in Sections III.B.8.
  - e. Daily tons of bulk material loaded at each site (production).
  - f. Fugitive dust information consisting of the daily total miles driven on unpaved roads within the operating site for all plant vehicles.

Addendum #2 Analysis  
LaSalle Sand and Gravel, LLC  
Montana Air Quality Permit (MAQP) #3289-02

I. Permitted Equipment

LaSalle owns and operates a portable non-metallic mineral processing operation consisting of two crushers with a maximum capacity of 150 tons per hour (TPH) each, a 2 deck screen with a maximum capacity of 150 TPH, two diesel-fired engine generators with a total combined maximum capacity of 1,095 horsepower (hp), and associated material handling (material handling conveyors/stackers), and processing equipment.

II. Source Description

LaSalle proposes to use this crushing/screening plant to crush, screen, 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 via a hopper and transferred by conveyor to the crushers. From the crusher, materials are sent to the screen, where they are separated and conveyed to stockpiles.

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

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.

#### IV. Emission Inventory

Summer Season [April 1 – September 30] <sup>(a)</sup>								
Emission Source	Emissions Lbs/Day <sup>(b)</sup>							
	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	PM <sub>cond</sub>	CO	NOx	SO <sub>2</sub>	VOC
1975 Pioneer Jaw Crusher	4.32	1.94	0.36					
1975 El Jay Cone Crusher	4.32	1.94	0.36					
1975 El Jay 2-Deck Screen (5'x16')	7.92	2.66	0.18					
Material Handling	33.37	15.73	3.56					
Diesel-fired Engine Generators (1095 hp maximum)	57.82	57.82	10.23	1.42	175.55	814.68	53.87	66.07
Unpaved Roadways (Haul Roads)	60.18	16.59	1.66					
<b>TOTAL EMISSIONS [lbs/day] ►</b>	<b>167.92</b>	<b>96.69</b>	<b>16.34</b>	<b>1.42</b>	<b>175.55</b>	<b>814.68</b>	<b>53.87</b>	<b>66.07</b>

Winter Season [October 1 – March 31] <sup>(c)</sup>								
Emission Source	Emissions Lbs/Day <sup>(b)</sup>							
	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	PM <sub>cond</sub>	CO	NOx	SO <sub>2</sub>	VOC
1975 Pioneer Jaw Crusher	3.60	1.62	0.30					
1975 El Jay Cone Crusher	3.60	1.62	0.30					
1975 El Jay 2-Deck Screen (5'x16')	6.60	2.22	0.15					
Material Handling	27.81	13.11	2.96					
Diesel-fired Engine Generators (1,095 hp maximum)	48.18	48.18	8.52	1.18	146.29	678.90	44.90	55.06
Unpaved Roadways (Haul Roads)	50.15	13.82	1.38					
<b>TOTAL EMISSIONS [lbs/day] ►</b>	<b>139.94</b>	<b>80.57</b>	<b>13.62</b>	<b>1.18</b>	<b>146.29</b>	<b>678.90</b>	<b>44.90</b>	<b>55.06</b>

- (a) Daily hours of operation are unrestricted during the Summer Season as PM<sub>10</sub> emissions are less than 547 pounds per day.
- (b) PM, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions presented in the table represent the sum of the filterable and condensable particulate matter (CPM) fractions. All CPM is considered to be PM<sub>2.5</sub>.
- (c) Daily Hours of operation are restricted during the Winter Season to restrict potential PM<sub>10</sub> emissions to less than 82 pounds per day and to not exceed a modeled ambient air impact of 5 micrograms per cubic meter for a 24-hour period

CO, carbon monoxide  
 NO<sub>x</sub>, oxides of nitrogen  
 PM, particulate matter  
 PM<sub>10</sub>, particulate matter with an aerodynamic diameter of 10 microns or less  
 PM<sub>2.5</sub>, particulate matter with an aerodynamic diameter of 2.5 microns or less  
 PM<sub>cond</sub>, condensable particulate matter  
 SO<sub>2</sub>, oxides of sulfur  
 TPY, tons per year  
 VOC, volatile organic compounds

#### Portable Crushing & Screening Plant

Production Rate:	<u>Maximum Capacity</u>	<u>Summer Season Allowable</u>	<u>Winter Season-Allowable</u>
Crushers	300 tons/hour	7200 tons/day	6000 tons/day
Deck Screen	150 tons/hour	3600 tons/day	3000 tons/day
Power Plant:	1095 hp		

#### Pioneer Jaw Crusher [SCC 3-05-030-03]

Production Rate:	150 tons/hour (Maximum Capacity)
Hours of Operation:	24 hours/day - Summer Season (Maximum)
	20 hours/day - Winter Season (Maximum Allowable)

**Material Processing:**

PM Emissions (controlled):

Emission Factor	0.0012 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]
Calculations	(0.0012 lbs/ton) * (150 tons/hr) =	0.18 lbs/hr
	(0.18 lbs/hr) * (24 hrs/day) =	4.32 lbs/day (Summer Season)
	(0.18 lbs/hr) * (20 hrs/day) =	3.60 lbs/day (Winter Season)

PM<sub>10</sub> Emissions (controlled):

Emission Factor	0.00054 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]
Calculations	(0.00054 lbs/ton) * (150 tons/hr) =	0.08 lbs/hr
	(0.08 lbs/hr) * (24 hrs/day) =	1.94 lbs/day (Summer Season)
	(0.08 lbs/hr) * (20 hrs/day) =	1.62 lbs/day (Winter Season)

PM<sub>2.5</sub> Emissions (controlled):

Emission Factor	0.0001 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]
Calculations	(0.0001 lbs/ton) * (150 tons/hr) =	0.02 lbs/hr
	(0.02 lbs/hr) * (24 hrs/day) =	0.36 lbs/day (Summer Season)
	(0.02 lbs/hr) * (20 hrs/day) =	0.30 lbs/day (Winter Season)

**El-Jay Cone Crusher [SCC 3-05-030-03]**

Production Rate:	150 tons/hour (Design Maximum)
Hours of Operation:	24 hours/day - Summer Season (Maximum Allowable)
	20 hours/day - Winter Season (Maximum Allowable)

**Material Processing:**

PM Emissions (controlled):

Emission Factor	0.0012 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]
Calculations	(0.0012 lbs/ton) * (150 tons/hr) =	0.18 lbs/hr
	(0.18 lbs/hr) * (24 hrs/day) =	4.32 lbs/day (Summer Season)
	(0.18 lbs/hr) * (20 hrs/day) =	3.60 lbs/day (Winter Season)

PM<sub>10</sub> Emissions (controlled):

Emission Factor	0.00054 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]
Calculations	(0.00054 lbs/ton) * (150 tons/hr) =	0.08 lbs/hr
	(0.08 lbs/hr) * (24 hrs/day) =	1.94 lbs/day (Summer Season)
	(0.08 lbs/hr) * (20 hrs/day) =	1.62 lbs/day (Winter Season)

PM<sub>2.5</sub> Emissions (controlled):

Emission Factor	0.0001 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]
Calculations	(0.0001 lbs/ton) * (150 tons/hr) =	0.02 lbs/hr
	(0.02 lbs/hr) * (24 hrs/day) =	0.36 lbs/day (Summer Season)
	(0.02 lbs/hr) * (20 hrs/day) =	0.30 lbs/day (Winter Season)

**El Jay Deck Screen [SCC 3-05-020-02,03]**

Production Rate:	150 tons/hour (Design Maximum)
Hours of Operation:	24 hours/day - Summer Season (Maximum Allowable)
	20 hours/day - Winter Season (Maximum Allowable)

**Material Processing:**

PM Emissions (controlled):

Emission Factor	0.0022 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]
Calculations	$(0.0022 \text{ lbs/ton}) * (150 \text{ tons/hr}) =$	0.33 lbs/hr
	$(0.33 \text{ lbs/hr}) * (24 \text{ hrs/day}) =$	7.92 lbs/day (Summer Season)
	$(0.33 \text{ lbs/hr}) * (20 \text{ hrs/day}) =$	6.60 lbs/day (Winter Season)

PM<sub>10</sub> Emissions (controlled):

Emission Factor	0.00074 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]
Calculations	$(0.00074 \text{ lbs/ton}) * (150 \text{ tons/hr}) =$	0.11 lbs/hr
	$(0.11 \text{ lbs/hr}) * (24 \text{ hrs/day}) =$	2.66 lbs/day (Summer Season)
	$(0.11 \text{ lbs/hr}) * (20 \text{ hrs/day}) =$	2.22 lbs/day (Winter Season)

PM<sub>2.5</sub> Emissions (controlled):

Emission Factor	0.00005 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]
Calculations	$(0.00005 \text{ lbs/ton}) * (150 \text{ tons/hr}) =$	0.01 lbs/hr
	$(0.01 \text{ lbs/hr}) * (24 \text{ hrs/day}) =$	0.18 lbs/day (Summer Season)
	$(0.01 \text{ lbs/hr}) * (20 \text{ hrs/day}) =$	0.15 lbs/day (Winter Season)

**Material Handling:**

**Un-fragmented Stone Load-In ► Crushers [SCC 3-05-020-31]**

Process Rate:	300 tons/hour [2 Crushers]
Operating Hours:	24 hours/day - Summer Season (Maximum Allowable)
	20 hours/day - Winter Season (Maximum Allowable)

**Particulate Emissions:**

PM Emissions:

Emission Factor	0.00016 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]
Calculations	$(0.00016 \text{ lbs/ton}) * (300 \text{ tons/hr}) =$	0.05 lbs/hr
	$(0.05 \text{ lbs/hr}) * (24 \text{ hrs/day}) =$	1.15 lbs/day (Summer Season)
	$(0.048 \text{ lbs/hr}) * (20 \text{ hrs/day}) =$	0.96 lbs/day (Winter Season)

PM<sub>10</sub> Emissions:

Emission Factor	0.00016 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]
Calculations	$(0.00016 \text{ lbs/ton}) * (300 \text{ tons/hr}) =$	0.05 lbs/hr
	$(0.05 \text{ lbs/hr}) * (24 \text{ hrs/day}) =$	1.15 lbs/day (Summer Season)
	$(0.048 \text{ lbs/hr}) * (20 \text{ hrs/day}) =$	0.96 lbs/day (Winter Season)

PM<sub>2.5</sub> Emissions:

Emission Factor	0.00016 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]
Calculations	$(0.00016 \text{ lbs/ton}) * (300 \text{ tons/hr}) =$	0.05 lbs/hr
	$(0.05 \text{ lbs/hr}) * (24 \text{ hrs/day}) =$	1.15 lbs/day (Summer Season)
	$(0.048 \text{ lbs/hr}) * (20 \text{ hrs/day}) =$	0.96 lbs/day (Winter Season)

**Conveyor Transfer Points [SCC 3-05-020-06]**

Process Rate:	150 tons/hour
Total Transfers:	9 Transfers [2 Crushers & 1 Screen - Based on Process Flow Diagram]
Operating Hours:	24 hours/day - Summer Season (Maximum Allowable)
	20 hours/day - Winter Season (Maximum Allowable)

**Particulate Emissions:**

PM Emissions (controlled):

Emission Factor	0.00014 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]	
Calculations	$(0.00014 \text{ lbs/ton}) * (150 \text{ tons/hr}) * (9 \text{ Transfers}) =$		0.19 lbs/hr
	$(0.189 \text{ lbs/hr}) * (24 \text{ hrs/day}) =$		4.54 lbs/day (Summer Season)
	$(0.189 \text{ lbs/hr}) * (20 \text{ hrs/day}) =$		3.78 lbs/day (Winter Season)

PM<sub>10</sub> Emissions (controlled):

Emission Factor	0.000046 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]	
Calculations	$(0.000046 \text{ lbs/ton}) * (150 \text{ tons/hr}) * (9 \text{ Transfers}) =$		0.062 lbs/hr
	$(0.062 \text{ lbs/hr}) * (24 \text{ hrs/day}) =$		1.49 lbs/day (Summer Season)
	$(0.062 \text{ lbs/hr}) * (20 \text{ hrs/day}) =$		1.24 lbs/day (Winter Season)

PM<sub>2.5</sub> Emissions (controlled):

Emission Factor	0.000013 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]	
Calculations	$(0.000013 \text{ lbs/ton}) * (150 \text{ tons/hr}) * (9 \text{ Transfers}) =$		0.018 lbs/hr
	$(0.018 \text{ lbs/hr}) * (24 \text{ hrs/day}) =$		0.42 lbs/day (Summer Season)
	$(0.02 \text{ lbs/hr}) * (20 \text{ hrs/day}) =$		0.35 lbs/day (Winter Season)

**Storage Pile Load-In & Load-Out**

Process Rate:	150 tons/hour [1 Screener]
Pile Transfers:	2 [Initial Pile Formation; Pile Load-Out to Trucks]
Operating Hours:	24 hours/day - Summer Season (Maximum Allowable)
	20 hours/day - Winter Season (Maximum Allowable)

**Particulate Emissions:**

$$\text{Emission Factor} \quad EF = k (0.0032) * [(U/5)^{1.3} / (M / 2)^{1.4}] \quad [\text{AP-42 13.2.4, 11/06}]$$

where: EF, Emission Factor = lbs Emitted / ton Processed

$$k, \text{ Dimensionless Particle Size Multiplier PM} = 0.74 \quad [\text{AP-42 13.2.4, 11/06}]$$

$$k, \text{ Dimensionless Particle Size Multiplier PM}_{10} = 0.35 \quad [\text{AP-42 13.2.4, 11/06}]$$

$$k, \text{ Dimensionless Particle Size Multiplier PM}_{2.5} = 0.053 \quad [\text{AP-42 13.2.4, 11/06}]$$

$$U, \text{ Mean Wind Speed (mph)} = 9.33 \quad [\text{ASOS/AWOS AVE-MT 10 yr Ave.}]$$

$$M, \text{ Material Moisture Content (\%)} = 2.53 \quad [\text{AP-42 13.2.4.3, 11/06}]$$

PM Emissions:

Emission Factor	$EF = 0.74 * (0.0032) * [(9.33/5)^{1.3} / (2.53/2)^{1.4}] =$		0.0038 lbs/ton
Calculations	$(0.0038 \text{ lbs/ton}) * (150 \text{ tons/hr}) * (2 \text{ pile transfers}) =$		1.15 lbs/hr
	$(1.15 \text{ lbs/hr}) * (24 \text{ hrs/day}) =$	27.68	lbs/day (Summer Season)
	$(1.15 \text{ lbs/hr}) * (20 \text{ hrs/day}) =$	23.07	lbs/day (Winter Season)

PM<sub>10</sub> Emissions:

Emission Factor	$EF = 0.35 * (0.0032) * [(9.33/5)^{1.3} / (2.53/2)^{1.4}] =$		0.0018 lbs/ton
Calculations	$(0.0018 \text{ lbs/ton}) * (150 \text{ tons/hr}) * (2 \text{ pile transfers}) =$		0.55 lbs/hr
	$(0.55 \text{ lbs/hr}) * (24 \text{ hrs/day}) =$	13.09	lbs/day (Summer Season)
	$(0.55 \text{ lbs/hr}) * (20 \text{ hrs/day}) =$	10.91	lbs/day (Winter Season)

PM<sub>2.5</sub> Emissions:

Emission Factor	$EF = 0.053 * (0.0032) * [(9.33/5)^{1.3} / (2.525/2)^{1.4}] =$		0.0003 lbs/ton
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Calculations (0.0003 lbs/ton) \* (150 tons/hr) \* (2 pile transfers) = 0.08 lbs/hr  
 (0.08 lbs/hr) \* (24 hrs/day) = 1.98 lbs/day (Summer Season)  
 (0.08 lbs/hr) \* (20 hrs/day) = 1.65 lbs/day (Winter Season)

**Diesel-fired  
Generators:**

Output Capacity: 1095 hp  
 Fuel Input: 7.67 MMBtu/hr  
 55.9 gallons/hour [Estimated]  
 Hours of Operation: 24 hours/day - Summer Season (Maximum Allowable)  
 20 hours/day - Winter Season (Maximum Allowable)

**Particulate Emissions:**

PM Emissions:

Emission Factor 0.0022 lb/hp-hr [AP-42 3.3-1, 10/96 ]  
 Calculations (0.0022 lb/hp-hr) \* (1095 hp) = 2.41 lbs/hr  
 (2.41 lbs/hr) \* (24 hrs/day) = 57.82 lbs/day (Summer Season)  
 (2.41 lbs/hr) \* (20 hrs/day) = 48.18 lbs/day (Winter Season)

PM<sub>2.5</sub> Emissions (Condensable):

Emission Factor 0.0077 lb/MMBtu-hr [AP-42 3.4-2, 10/96 ]  
 Calculations (0.0077 lb/MMBtu-hr) \* (7.67 MMBtu/hr) = 0.06 lbs/hr  
 (0.06 lbs/hr) \* (24 hrs/day) = 1.42 lbs/day (Summer Season)  
 (0.06 lbs/hr) \* (20 hrs/day) = 1.18 lbs/day (Winter Season)

PM<sub>10</sub> Emissions:

Emission Factor 0.0022 lb/hp-hr [AP-42 3.3-1, 10/96 ]  
 Calculations (0.0022 lb/hp-hr) \* (1095 hp) = 2.41 lbs/hr  
 (2.41 lbs/hr) \* (24 hrs/day) = 57.82 lbs/day (Summer Season)  
 (2.41 lbs/hr) \* (20 hrs/day) = 48.18 lbs/day (Winter Season)

PM<sub>2.5</sub> Emissions (Filterable):

Emission Factor 0.0479 lb/MMBtu-hr [AP-42 3.4-2, 10/96 ]  
 Calculations (0.0479 lb/MMBtu-hr) \* (7.67 MMBtu/hr) = 0.37 lbs/hr  
 (0.37 lbs/hr) \* (24 hrs/day) = 8.81 lbs/day (Summer Season)  
 (0.37 lbs/hr) \* (20 hrs/day) = 7.34 lbs/day (Winter Season)

**CO Emissions:**

Emission Factor 0.00668 lb/hp-hr [AP-42 3.4-1, 10/96 ]  
 Calculations (0.00668 lb/hp-hr) \* (1095 hp) = 7.31 lbs/hr  
 (7.31 lbs/hr) \* (24 hrs/day) = 175.55 lbs/day (Summer Season)  
 (7.31 lbs/hr) \* (20 hrs/day) = 146.29 lbs/day (Winter Season)

**NOx Emissions:**

Emission Factor 0.031 lb/hp-hr [AP-42 3.4-1, 10/96 ]  
 Calculations (0.031 lb/hp-hr) \* (1095 hp) = 33.95 lbs/hr  
 (33.95 lbs/hr) \* (24 hrs/day) = 814.68 lbs/day (Summer Season)  
 (33.95 lbs/hr) \* (20 hrs/day) = 678.90 lbs/day (Winter Season)

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

Emission Factor 0.00205 lb/hp-hr [AP-42 3.4-1, 10/96 ]  
 Calculations (0.00205 lb/hp-hr) \* (1095 hp) = 2.24 lbs/hr

$$(2.24 \text{ lbs/hr}) * (24 \text{ hrs/day}) = 53.87 \text{ lbs/day (Summer Season)}$$

$$(2.24 \text{ lbs/hr}) * (20 \text{ hrs/day}) = 44.90 \text{ lbs/day (Winter Season)}$$

**VOC Emissions:**

Emission Factor 0.002514 lb/hp-hr [AP-42 3.4-1, 10/96 ]

Calculations (0.002514 lb/hp-hr) \* (1095 hp) = 2.75 lbs/hr

$$(2.75 \text{ lbs/hr}) * (24 \text{ hrs/day}) = 66.07 \text{ lbs/day (Summer Season)}$$

$$(2.75 \text{ lbs/hr}) * (20 \text{ hrs/day}) = 55.06 \text{ lbs/day (Winter Season)}$$

**Unpaved Roadways**

Vehicle Weight: < 50 Tons

Miles Travelled: 5 Miles/Day [Estimate]

0.21 miles/hour [Estimate]

Hours of Operation: 24 hours/day - Summer Season (Maximum Allowable)

20 hours/day - Winter Season (Maximum Allowable)

**Particulate Emissions:**

Emission Factor  $EF = k(s/12)^a * (W/3)^b$  [AP-42 13.2.2, 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<sub>10</sub> = 1.5 [AP-42 Table 13.2.2-2, 11/06]

k, Empirical Constant PM<sub>2.5</sub> = 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<sub>10</sub>/PM<sub>2.5</sub> = 0.9 [AP-42 Table 13.2.2-2, 11/06]

b, Empirical Constant PM - PM<sub>2.5</sub> = 0.45 [AP-42 Table 13.2.2-2, 11/06]

**PM Emissions:**

Emission Factor  $EF = 4.9 * (7.1/12)^{0.7} * (50/3)^{0.45} = 12.04 \text{ lbs/VMT}$

Calculations (12.04 lbs/VMT) \* (0.21 miles/hr) = 2.51 lbs/hr

$$(2.51 \text{ lbs/hr}) * (24 \text{ hrs/day}) = 60.18 \text{ lbs/day (Summer Season)}$$

$$(2.51 \text{ lbs/hr}) * (20 \text{ hrs/day}) = 50.15 \text{ lbs/day (Winter Season)}$$

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

Emission Factor  $EF = 1.5 * (7.1/12)^{0.9} * (50/3)^{0.45} = 3.32 \text{ lbs/VMT}$

Calculations (3.32 lbs/VMT) \* (0.21 miles/hr) = 0.69 lbs/hr

$$(0.69 \text{ lbs/hr}) * (24 \text{ hrs/day}) = 16.59 \text{ lbs/day (Summer Season)}$$

$$(0.69 \text{ lbs/hr}) * (20 \text{ hrs/day}) = 13.82 \text{ lbs/day (Winter Season)}$$

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

Emission Factor  $EF = 0.15 * (7.1/12)^{0.9} * (50/3)^{0.45} = 0.33 \text{ lbs/VMT}$

Calculations (0.33 lbs/VMT) \* (0.21 miles/hr) = 0.07 lbs/day

$$(0.07 \text{ lbs/hr}) * (24 \text{ hrs/day}) = 1.66 \text{ lbs/day (Summer Season)}$$

$$(0.07 \text{ lbs/hr}) * (20 \text{ hrs/day}) = 1.38 \text{ lbs/day (Winter Season)}$$

**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<sub>10</sub>). Due to exceedances of the national standards for PM<sub>10</sub>, 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<sub>10</sub>. As a result of this designation, the EPA required the Department and the City-County Health Departments to submit PM<sub>10</sub> 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<sub>10</sub> emissions.

MAQP #3289-02 and Addendum #2 are for a portable crushing/screening plant that will locate at sites in or within 10 km of certain PM<sub>10</sub> 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 operate on an intermittent and temporary basis and any effects on air quality will be minor and short-lived.

#### VI. Air Quality Impacts

MAQP #3289-02 and Addendum #2 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.

Addendum #2 will cover the operations of this portable crushing/screening plant, while operating in or within 10 km of the Columbia Falls and Kalispell PM<sub>10</sub> nonattainment area (Home 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<sub>10</sub> nonattainment areas during the summer months (April 1 through September 30).

#### VII. Taking or Damaging Analysis

As required by 2-10-101 through 105, MCA, the Department conducted a private property taking and damaging assessment (see Section VIII of the Permit Analysis for MAQP #3289-02) and determined there are no taking or damaging implications.

#### VIII. Environmental Assessment

This permitting action will not result in an increase of emissions from the facility and is considered an administrative action; therefore, an environmental assessment is not required.

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