PRELIMINARY DETERMINATION
ON PERMIT APPLICATION

Date of Mailing: September 24, 2015

Name of Applicant: Mullinax Concrete

Source: Portable Crusher and Screen Facility

Proposed Action: The Department of Environmental Quality (Department) proposes to issue a permit, with conditions, to the above-named applicant. The application was assigned Montana Air Quality Permit Application Number 5149-00.

Proposed Conditions: See attached.

Public Comment: Any member of the public desiring to comment must submit such comments in writing to the Air Quality Bureau (Bureau) of the Department at the above address. Comments may address the Department's analysis and determination, or the information submitted in the application. In order to be considered, comments on this Preliminary Determination are due by October 09, 2015. Copies of the application and the Department's analysis may be inspected at the Bureau's office in Helena. For more information, you may contact the Department.

Departmental Action: The Department intends to make a decision on the application after expiration of the Public Comment period described above. A copy of the decision may be obtained at the above address. The permit shall become final on the date stated in the Department's Decision on this permit, unless an appeal is filed with the Board of Environmental Review (Board).

Procedures for Appeal: Any person jointly or severally adversely affected by the final action may request a hearing before the Board. Any appeal must be filed by the date stated in the Department's Decision on this permit. The request for a hearing shall contain an affidavit setting forth the grounds for the request. Any hearing will be held under the provisions of the Montana Administrative Procedures Act. Submit requests for a hearing in triplicate to: Chairman, Board of Environmental Review, P.O. Box 200901, Helena, MT 59620.

For the Department,

Julie A. Merkel
Permitting Services Section Supervisor
Air Quality Bureau
(406) 444-3626

Loni Patterson
Environmental Engineer
Air Quality Bureau
(406) 444-1452

JM:LP
Enclosure

MONTANA AIR QUALITY PERMIT

Issued To: Mullinax Concrete
PO Box 2044
Sheridan, WY 82801

MAQP: #5149-00
Application Complete: 9/1/2015
Preliminary Determination Issued: 9/15/15
Permit Final:
AFS #: 777-5149

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Mullinax Concrete (Mullinax) 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. Permitted Equipment

Mullinax proposes to operate a portable crushing and screening facility and associated equipment. A complete list of permitted equipment is contained in Section I.A of the permit analysis.

B. Plant Location

The initial location of the proposed portable crushing and screening facility will be located at Southwest ¼ Southwest ¼ Section 7, Township 9 South, Range 41 East, Big Horn County, MT. However, MAQP 5149-00 applies while operating at any location in Montana, except those areas having a Department of Environmental Quality (Department)-approved permitting program, areas considered tribal lands, or areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* An addendum will be required for locations 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 40 CFR 60 Subpart OOO affected crusher shall not exhibit an opacity in excess of the following averaged over six 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 40 CFR 60 Subpart OOO affected equipment (such as screens and conveyors) shall not exhibit an opacity in excess of the following averaged over six 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 emission from 40 CFR 60 Subpart Y affected equipment shall not exhibit an opacity in excess of 10% or greater (40 CFR 60 Subpart Y and ARM 17.8.340).

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

5. 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, II.A.3, and II.A.4 (ARM 17.8.749 and ARM 17.8.752).

6. Mullinax 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).

7. Mullinax 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.6 (ARM 17.8.749).

8. Mullinax shall not operate more than one crusher at any given time and the total combined maximum rated design capacity of the crusher shall not exceed 200 tons per hour (TPH) (ARM 17.8.749).

9. Mullinax shall not operate more than one screen(s) at any given time and the total combined maximum rated design capacity of the screen(s) shall not exceed 200 TPH (ARM 17.8.749).

10. Mullinax may have onsite and operate one or more diesel-fired engines including generator set engines, where the combined maximum rated design capacity of the engines shall not exceed 831 horsepower (hp) and the engines shall be compliant with Environmental Protection Agency (EPA) non-road compression-ignition engine Tier 2 or higher emission standards pursuant to 40 CFR Part 89.112. (ARM 17.8.749).

11. If the permitted equipment is used in conjunction with any other equipment owned or operated by Mullinax, 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).

12. Mullinax 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* and 40 CFR 60 Subpart Y, *Standards of Performance for Coal Preparation and Processing Plants* (ARM 17.8.340 and 40 CFR 60, Subpart OOO and Subpart Y).

13. Mullinax 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. Additional testing may be required by 40 CFR 60, Subpart OOO and Subpart Y (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. Mullinax 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. Mullinax 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. Mullinax 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 Mullinax as a permanent business record for at least five 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).

D. Notification

Mullinax shall provide the Department with written notification of the actual start-up date of the Mullinax facility postmarked within 15 days after the actual start-up date (ARM 17.8.749).

SECTION III: General Conditions

A. Inspection – Mullinax 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) or 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 Mullinax fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Mullinax 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 action 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 therefor, 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 the Department 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 Mullinax 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 three 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. Mullinax 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
Mullinax Concrete
MAQP #5149-00

I. Introduction/Process Description

Mullinax owns and operates a portable crushing and screening facility with a combined maximum rated design capacity of 200 tons per hour (TPH) crushing and screening production. The facility employs diesel-fired generators sets to provide power to equipment with a maximum rated design capacity of 831 horsepower (hp).

A. Permitted Equipment

The following list of permitted equipment is based on the information provided within the application submitted by Mullinax and a provided for reference. MAQP # 5149-00 is written de minimis friendly and operational flexibility is provided so that alternate equipment may be utilized as long as maximum capacities are not exceeded and permit conditions are met. See Section II of the MAQP for specific equipment limitations and/or conditions. Equipment permitted under this action consists of the following:

- K40 Generator Set: 2008 Caterpillar C18 diesel-fired engine generator, 831 hp max capacity
- K41, K42, K43: three 2014 Superior 36x60 STKP 60' conveyors
- 2010 Superior 3680 80' conveyor
- K22: 2010 MGL 7436 100' stacker
- K35: 2014 Superior F36x125PS 125' stacker
- K34: Masaba 6x20 screen, 200 tph
- 2014 Metso C110 jaw crusher, 200 tph
- Associated material handling equipment

B. Source Description

Mullinax proposed the initial location and home pit to be located at Southwest ¼ Southwest ¼ Section 7, Township 9 South, Range 41 East, North 45° 3.362´latitude – West 106° 45.814´ longitude, Big Horn County, Montana.

Coal, sand, gravel and scoria will be mined in an open pit excavation. Following mining, the raw material will be transported to the processing plant where it is emptied onto the feeder screen. The material is transported from the feeder screen to a jaw crusher for size reduction. After the initial size reduction by the jaw crusher is complete, the material is conveyed to a cone crusher to produce crushed aggregate. The material is then screened for sizing. The material that passes through the screen is transported to the stockpiles. The material that is too large is recycled back through to a cone crusher.

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 locations of complete copies of all applicable rules and regulations 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).

   Mullinax 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 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 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

5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM_{10}
11. ARM 17.8.230 Fluoride in Forage

Mullinax 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, Mullinax 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 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 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). This facility is not an NSPS affected source because it does not meet the definition of any NSPS subpart defined in 40 CFR Part 60.

   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 Mullinax, the crushers used under MAQP #5149-00 are subject to this subpart because it meets the definition of affected facility and was constructed or modified after August 31, 1983.

- 40 CFR 60.674 One current applicable requirement: The facility shall perform monthly inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expediently as practical if owner or operator find that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in logbook required under 40 CFR 60.676(b).

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 Mullinax, the CI ICE equipment to be used under MAQP #5149-00 may be subject to this subpart if the CI ICE remains in a location for more than 12 months.

d. 40 CFR 60, Subpart Y- Standard of Performance for Coal Preparation and Process Plants. The provision of this subpart apply to affect facility in coal preparation and processing plants that process more than 200 tons of coal per day. Based on the information submitted by Mullinax, the facility is potentially subject to this subpart if the facility process 200 tons of coal per day.

7. ARM 17.8.341 Emission Standards for Hazardous Air Pollutants. This source shall comply with the standards and provisions of 40 CFR Part 61, as appropriate.

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. Mullinax is considered a NESHAP-affected facility under 40 CFR Part 63 and is 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. An area source of HAP emissions is a source that is not a major source. Based on the information submitted by

Mullinax, the RICE equipment to be used under MAQP #5149-00 may be subject to this subpart if the RICE remains 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 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. Mullinax submitted the appropriate permit application fee for the current permit action.

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

   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 asphalt plant, crusher or screen that has the potential to emit (PTE) greater than 15 tons per year of any pollutant. Mullinax has a PTE greater than 15 tons per year of NO_x, SO_2, PM, 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. Mullinax submitted the required

permit application for the current permit action. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Mullinax submitted an affidavit of publication of public notice for the August 24, 2015, issue of *The Sheridan Press*, a newspaper of general circulation in the Town of Sheridan, in Sheridan County, Wyoming, as proof of compliance with the public notice requirements.

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

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

12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).

13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.

14. ARM 17.8.765 Transfer of Permit. (1) This rule states that an 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 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 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 #5149-00, 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 and potentially Subpart Y and Subpart IIII).

   e. This facility is potentially subject to a current NESHAP (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.

   Based on these facts, 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.

III. BACT Determination

A BACT determination is required for any new or modified source. Mullinax shall install on the new or modified source the maximum air pollution control capability that is technically practicable and economically feasible. A BACT analysis accompanied the permit application submitted by Mullinax, MAQP #5149-00, addressing available methods of controlling emission from operation of crushing and screen operation. The Department has reviewed these methods, as well as previous BACT determinations. The following control options have been reviewed by the Department in order to make the following BACT determinations. BACT analysis is conducted in accordance with the *New Source Review Workshop Manual, 1990*.

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

A. Process and Fugitive Particulate Emissions

Two types of emission controls are readily available and used for dust suppression of fugitive emissions that result from the operation of crushing/screening equipment and associated activities. These two control methods are water and chemical dust suppressant. Chemical dust suppressant could be used on the area surrounding the crushing/screening operation, and for emission from the crushing/screening operation itself. However, in view of the fact that water is more readily available, more cost effective, is equally effective as chemical dust suppressant, while presenting less potential environmental quality degradation, water has been identified as the most appropriate method of pollution control of particulate emissions. In addition, water suppression has been required of recently permitted similar sources.

Mullinax shall not cause or authorize to be discharged into the atmosphere from any NSPS-affected crusher any visible emissions that exhibit an opacity of 12% or greater averaged over six consecutive minutes for crushers that commenced construction, modification, or reconstruction on or after April 22, 2008. Additionally, Mullinax shall not cause or authorize to be discharged into the atmosphere from any other associated NSPS-affected equipment, such as screens and material conveyors, any visible emissions that exhibit an opacity of 7% or greater averaged over six consecutive minutes for equipment that commences construction, modification, or reconstruction after April 22, 2008, and 10% for equipment that commences construction, modification, or reconstruction after August 31, 1983, but before April 22, 2008. Finally, Mullinax shall not cause or authorize to be discharged into the atmosphere from any crusher, screen or associated equipment, not subject to NSPS, any visible emission that exhibit an opacity of 20% or greater averaged over six consecutive minutes.

Mullinax is required to have water spray bars and water available on site at all times and to apply water, as necessary, to maintain compliance with the opacity restrictions and reasonable precaution limitations.

The control options selected contained control equipment and control costs comparable to other recently permitted similar sources and are capable of achieving the appropriate emission standards. The Department determined that using water spray bars and water dust suppressant to maintain compliance with the opacity requirements and reasonable precaution limitations constitutes BACT.

B. Diesel-Fired Engine (s)

Any new diesel-fired engine would likely be required to comply with the federal engine emission limitations including, for example, EPA Tier emission standards for non-road engines (40 CFR Part 89 or 1039), New Source Performance Standard emission limitations for stationary compression ignition engines (40 CFR 60, Subpart IIII), or National Emission Standards for Hazardous Air Pollutant Sources for Reciprocation Internal Combustion Engines (40 CFR 63, Subpart ZZZZ). Therefore, the Department has determined that compliance with applicable federal standards and proper operation and maintenance of the engines constitutes BACT for the engine.

IV. Emission Inventory

Maximum Process Rate(Actual):	200	tons/hr	(Maximum Process Rate = 200 tons/hr)
Maximum Process Rate(Crusher):	200	tons/hr	
Maximum Hours of Operation(Process):	8760	hrs/yr	(Permit Limit)
Maximum Hours of Operation(Diesel):	8760	hrs/yr	(Permit Limit)
Diesel Horsepower:	831	hp	(Engine Limit)
Output:	1,752,000	tons	

CONTROLLED				**tons/year**				
Emission Source	**PM**	**PM10**	**PM2.5**	**NOx**	**CO**	**VOC**	**SO2**	**Total HAPs**
Cold Aggregate Storage Piles	2.89	1.37	0.21	--	--	--	--	--
Cold Aggregate Handling/Conveyors	0.74	0.24	0.07	--	--	--	--	--
Cold Aggregate Screens	1.93	0.65	0.04	--	--	--	--	--
Wash Plant	0.00	0.00	0.00	--	--	--	--	--
200 TPH Jaw Crusher	1.05	0.47	0.09	--	--	--	--	--
Plant Load-Out	0.69	0.35	0.05	--	--	--	--	--
Haul Roads / Vehicle Traffic	6.39	1.82	0.36	--	--	--	--	--
831 hp Diesel Engine Generator	1.20	1.20	1.20	55.05	20.94	9.15	7.46	0.16
Total Emissions	**9.33**	**3.84**	**1.70**	**55.05**	**20.94**	**9.15**	**7.46**	**0.16**

Notes:

1. Values in table reflect "controlled" cells from subsequent worksheets
2. Haul road emissions assumes 5 vehicle miles traveled per day
3. Emission values reflect controlled emission values from AP 42
4. Emission values for the diesel generator reflect tier 2 emission factors
5. BTU value for Diesel Fuel taken from US Dept. of Energy
6. HAP emission factors taken from AP 42, Chapter 3, Table 3.3-2

Footnotes:

a. The inventory reflects maximum allowable emission for all pollutants based on maximum production and year-round operation (8760 hours).

** **CO = carbon monoxide**
HAPs = hazardous air pollutants
hp = horsepower
lb = pound
N/A = not applicable
ND = no data available
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_2 = sulfur dioxide
TPH = tons per hour
TPY = tons per year
VOC = volatile organic compounds
yr = year

Cold Aggregate Storage Piles

Maximum Process Rate = 200 ton/hr (Maximum plant process rate)	200	**ton/hr**
Maximum Hours of Operation = 8,760 hrs/yr	8760	**hrs/yr**
Number of Piles = 1 piles	1	**piles**

PM Emissions:

Predictive equation for emission factor provided per AP 42, Sec. 13.2.4.3, 11/06.

Emission Factor = k (0.0032) * (U/5)^1.3 * (M / 2)^-1.4 = 0.00330 lb/ton	0.0033	**lb/ton**
Where: k = particle size multiplier = 0.74 (Value for PM < 30 microns per AP 42, Sec. 13.2.4.3, 11/06)	0.74	
U = mean wind speed = 8.2 mph (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06)	8.2	**mph**
M = material moisture content = 2.5% (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06)	2.5	**%**

Calculation: (200 ton/hr) * (8760 hrs/yr) * (1 piles) * (ton/2000 lb) * (0.0032961326585007 lb/ton) = 2.89 ton/yr	2.89	**ton/yr**

PM10 Emissions:

Predictive equation for emission factor provided per AP 42, Sec. 13.2.4.3, 11/06.

Emission Factor = k (0.0032) * (U/5)^1.3 * (M / 2)^-1.4 = 0.00156 lb/ton	0.00156	**lb/ton**
Where: k = particle size multiplier = 0.35 (Value for PM < 10 microns per AP 42, Sec. 13.2.4.3, 11/06)	0.35	
U = mean wind speed = 8.2 mph (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06)	8.2	**mph**
M = material moisture content = 2.5% (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06)	2.5	**%**
Calculation: (200 ton/hr) * (8760 hrs/yr) * (1 piles) * (ton/2000 lb) * (0.00155898166280438 lb/ton) = 1.37 ton/yr	1.37	**ton/yr**

PM2.5 Emissions:

Predictive equation for emission factor provided per AP 42, Sec. 13.2.4.3, 11/06.

Emission Factor = k (0.0032) * (U/5)^1.3 * (M / 2)^-1.4 = 0.00024 lb/ton	0.000236	**lb/ton**
Where: k = particle size multiplier = 0.053 (Value for PM < 2.5 microns per AP 42, Sec. 13.2.4.3, 11/06)	0.053	
U = mean wind speed = 8.2 mph (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06)	8.2	**mph**
M = material moisture content = 2.5% (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06)	2.5	**%**
Calculation: (200 ton/hr) * (8760 hrs/yr) * (1 piles) * (ton/2000 lb) * (0.000236074366081807 lb/ton) = 0.21 ton/yr	0.21	**ton/yr**

Conveyor Transfer Point (SCC 3-05-020-06)

Maximum Process Rate = 200 ton/hr (Maximum plant process rate)	200	**ton/hr**
Maximum Hours of Operation = 8,760 hrs/yr	8760	**hrs/yr**
Number of Transfers = 6 transfer (Company Information)	6	**transfer**

Total PM Emissions:

Emission Factor = 0.00014 lb/ton (0.00014 controlled, AP 42, Table 11.19.2-2, 8/04)	0.00014	**lb/ton**
Calculation: (200 ton/hr) * (8760 hrs/yr) * (6 transfer) * (ton/2000 lb) * (0.00014 lb/ton) = 0.74 ton/yr	0.74	**ton/yr**

Total PM10 Emissions:

Emission Factor = 0.000046 lb/ton (0.000046 controlled, AP 42, Table 11.19.2-2, 8/04)	0.000046	**lb/ton**
Calculation: (200 ton/hr) * (8760 hrs/yr) * (6 transfer) * (ton/2000 lb) * (0.00014 lb/ton) = 0.24 ton/yr	0.24	**ton/yr**

Total PM2.5 Emissions

Emission Factor = 0.000013 lb/ton (0.000013 controlled, AP 42, Table 11.19.2-2, 8/04)	0.000013	**lb/ton**
Calculation: (200 ton/hr) * (8760 hrs/yr) * (6 transfer) * (ton/2000 lb) * (0.00014 lb/ton) = 0.07 ton/yr	0.07	**ton/yr**

Screening (SCC 3-05-020-02, 03)

Maximum Process Rate = 200 ton/hr (Maximum plant process rate)	200	**ton/hr**
Maximum Hours of Operation = 8,760 hrs/yr 1752000 tons/year	8760	**hrs/yr**
Number of Screens = 1 screen(s) (Company Information)	1	**screen(s)**

Total PM Emissions:

Emission Factor = 0.0022 lb/ton (0.0022 controlled, AP 42, Table 11.19.2-2, 8/04)	0.0022	**lb/ton**
Calculation: (200 ton/hr) * (8760 hrs/yr) * (1 screen(s)) * (ton/2000 lb) * (0.0022 lb/ton) = 1.93 ton/yr	1.93	**ton/yr**

Total PM10 Emissions:

Emission Factor = 0.00074 lb/ton (0.00074 controlled, AP 42, Table 11.19.2-2, 8/04)	0.00074	**lb/ton**
Calculation: (200 ton/hr) * (8760 hrs/yr) * (1 screen(s)) * (ton/2000 lb) * (0.0022 lb/ton) = 0.65 ton/yr	0.65	**ton/yr**

Total PM2.5 Emissions

Emission Factor = 0.00005 lb/ton (0.000050 controlled, AP 42, Table 11.19.2-2, 8/04)	0.00005	**lb/ton**
Calculation: (200 ton/hr) * (8760 hrs/yr) * (1 screen(s)) * (ton/2000 lb) * (0.0022 lb/ton) = 0.04 ton/yr	0.04	**ton/yr**

Wash Plant

Maximum Process Rate = 200 ton/hr (Maximum plant process rate)	200	**ton/hr**
Maximum Hours of Operation = 8,760 hrs/yr 0 tons/year	8760	**hrs/yr**
Number of Wash Plants = 0 plant(s) (Company Information)	0	**plant(s)**

Total PM Emissions:

Emission Factor = 0.0022 lb/ton (0.0022 controlled, AP 42, Table 11.19.2-2, 8/04)	0.0022	**lb/ton**
Calculation: (200 ton/hr) * (8760 hrs/yr) * (0 plant(s)) * (ton/2000 lb) * (0.0022 lb/ton) = 0.00 ton/yr	0.00	**ton/yr**

Total PM10 Emissions:

Emission Factor = 0.00074 lb/ton (0.00074 controlled, AP 42, Table 11.19.2-2, 8/04)	0.00074	**lb/ton**
Calculation: (200 ton/hr) * (8760 hrs/yr) * (0 plant(s)) * (ton/2000 lb) * (0.00074 lb/ton) = 0.00 ton/yr	0.00	**ton/yr**

Total PM2.5 Emissions

Emission Factor = 0.00005 lb/ton (0.000050 controlled, AP 42, Table 11.19.2-2, 8/04)	0.00005	**lb/ton**
Calculation: (200 ton/hr) * (8760 hrs/yr) * (0 plant(s)) * (ton/2000 lb) * (0.00005 lb/ton) = 0.00 ton/yr	0.00	**ton/yr**

Crushing [Jaw Crusher] (SCC 3-05-020-05)

Maximum Process Rate = 200 ton/hr (Application information)	200	**ton/hr**
Maximum Hours of Operation = 8,760 hrs/yr	8760	**hrs/yr**

PM Emissions:
Based on AP-42

Emission Factor = 0.0012 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04)	0.0012	**lb/ton**
Calculation: (200 ton/hr) * (8760 ton/hr) * (0.0012 lb/ton) * (ton/2000 lb) = 1.05 ton/yr	1.05	**ton/yr**

PM10 Emissions:
Based on AP-42

Emission Factor = 0.00054 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04)	0.00054	**lb/ton**
Calculation: (0) * ( ) * (0.00054 lb/ton) * (ton/2000 lb) = 0.47 ton/yr	0.47	**ton/yr**

PM2.5 Emissions

Emission Factor = 0.0001 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04)	0.0001	**lb/ton**
Calculation: (200 ton/hr) * (8760 ton/hr) * (0.0001 lb/ton) * (ton/2000 lb) = 0.09 ton/yr	0.09	**ton/yr**

Crushing [Jaw Crusher] (SCC 3-05-020-05) AS APPLIED TO CONE CRUSHER(S)

Maximum Process Rate = 0 ton/hr (Maximum plant process rate)	0	**ton/hr**
Maximum Hours of Operation = 8,760 hrs/yr	8760	**hrs/yr**

PM Emissions:

Based on AP-42

Emission Factor = 0.0012 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04)	0.0012	**lb/ton**
Calculation: (0 ton/hr) * (8760 hrs/yr) * (0.0012 lb/ton) * (ton/2000 lb) = 0.00 ton/yr	0.00	**ton/yr**

PM10 Emissions:

Based on AP-42

Emission Factor = 0.00054 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04)	0.00054	**lb/ton**
Calculation: (0 ton/hr) * (8760 hrs/yr) * (0.00054 lb/ton) * (ton/2000 lb) = 0.00 ton/yr	0.00	**ton/yr**

PM2.5 Emissions:

Emission Factor = 0.0001 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04)	0.0001	**lb/ton**
Calculation: (0 ton/hr) * (8760 hrs/yr) * (0.0001 lb/ton) * (ton/2000 lb) = 0.00 ton/yr	0.00	**ton/yr**

Truck Unloading (SCC 3-05-020-31)

Maximum Process Rate = 200 ton/hr (Maximum plant process rate)	200	**ton/hr**
Maximum Hours of Operation = 8,760 hrs/yr	8760	**hrs/yr**
Number of loads = 25 loads (Estimate)	25	**loads**

Total PM Emissions:

Emission Factor = 0.0000314 lb/ton (PM=PM10 / 51%, AP-42, Appendix B.2, Table B.2.2, Category 3, 9/90)	0.0000314	**lb/ton**
Calculation: (200 ton/hr) * (8760 hrs/yr) * (0.0000314 lb/ton) * (ton/2000 lb) * (25 loads) = 0.69 ton/yr	0.69	**ton/yr**

Total PM10 Emissions:

Emission Factor = 0.000016 lb/ton (PM10=1.6E-05, AP 42, Table 11.19.2-2, 8/04)	0.000016	**lb/ton**
Calculation: (200 ton/hr) * (8760 hrs/yr) * (0.000016 lb/ton) * (ton/2000 lb) * (25 loads) = 0.35 ton/yr	0.35	**ton/yr**

Total PM2.5 Emissions:

Emission Factor = 0.0000024 lb/ton (PM2.5=1.6E-05 * 15%, AP-42, Appendix B.2, Table B.2.2, Category 3, 9/90)	0.0000024	**lb/ton**
Calculation: (200 ton/hr) * (8760 hrs/yr) * (0.0000024 lb/ton) * (ton/2000 lb) * (25 loads) = 0.05 ton/yr	0.05	**ton/yr**

Haul Roads

Vehicle Miles Traveled (VMT) per Day = 5 VMT/day (Estimate)	5	**VMT/day**
VMT per hour = (5 VMT/day) * (day/24 hrs) = 0.21 VMT/hr	0.21	**VMT/hr**
Hours of Operation = 8,760 hrs/yr	8760	**hrs/yr**

PM Emissions:

Predictive equation for emission factor for unpaved roads at industrial sites provided per AP 42, Ch. 13.2.2, 11/06.

Emission Factor = k * (s / 12)^a * (W / 3)^b = 12.46 lb/VMT	12.46	**lb/VMT**
Where: k = constant = 4.9 lbs/VMT (Value for PM30/TSP, AP 42, Table 13.2.2-2, 11/06)	4.9	**lbs/VMT**
s = surface silt content = 7.1 % (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06)	7.1	**%**
W = mean vehicle weight = 54 tons (1994 average loaded/unloaded or a 40 ton truck)	54	**tons**
a = constant = 0.7 (Value for PM30/TSP, AP 42, Table 13.2.2-2, 11/06)	0.7	
b = constant = 0.45 (Value for PM30/TSP, AP 42, Table 13.2.2-2, 11/06)	0.45	
	50	**%**

Control Efficiency = 50% (Water spray or chemical dust suppressant)		
Calculation: (8760 hrs/yr) * (0.21 VMT/hr) * (12.46 lb/VMT) * (ton/2000 lb) = 11.37 tons/yr (Uncontrolled Emissions)	11.37	**tons/yr**
Calculation: (8760 hrs/yr) * (0.21 VMT/hr) * (4.90 lbs/VMT) * (ton/2000 lb) * (Control Efficiency) = 5.68 tons/yr (Controlled Emissions)	5.68	**tons/yr**

PM10 Emissions:
Predictive equation for emission factor for unpaved roads at industrial sites provided per AP 42, Ch. 13.2.2, 11/06.

Emission Factor = k * (s / 12)^a * (W / 3)^b = 3.43 lb/VMT	3.43	**lb/VMT**
Where: k = constant = 1.5 lbs/VMT (Value for PM10, AP 42, Table 13.2.2-2, 11/06)	1.5	**lbs/VMT**
s = surface silt content = 7.1 % (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06)	7.1	**%**
W = mean vehicle weight = 54 tons (1994 average loaded/unloaded or a 40 ton truck)	54	**tons**
a = constant = 0.9 (Value for PM10, AP 42, Table 13.2.2-2, 11/06)	0.9	
b = constant = 0.45 (Value for PM10, AP 42, Table 13.2.2-2, 11/06)	0.45	
Control Efficiency = 50% (Water spray or chemical dust suppressant)	50	**%**
Calculation: (8760 hrs/yr) * (0.21 VMT/hr) * (3.43 lb/VMT) * (ton/2000 lb) = 3.13 tons/yr (Uncontrolled Emissions)	3.13	**tons/yr**
Calculation: (8760 hrs/yr) * (0.21 VMT/hr) * (1.50 lbs/VMT) * (ton/2000 lb) * (control Efficiency) = 1.57 tons/yr (Controlled Emissions)	1.57	**tons/yr**

PM2.5 Emissions
Predictive equation for emission factor for unpaved roads at industrial sites provided per AP 42, Ch. 13.2.2, 11/06.

Emission Factor = k * (s / 12)^a * (W / 3)^b = 0.34 lb/VMT	0.34	**lb/VMT**
Where: k = constant = 0.15 lbs/VMT (Value for PM2.5, AP 42, Table 13.2.2-2, 11/06)	0.15	**lbs/VMT**
s = surface silt content = 7.1 % (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06)	7.1	**%**
W = mean vehicle weight = 54 tons (1994 average loaded/unloaded or a 40 ton truck)	54	**tons**
a = constant = 0.9 (Value for PM2.5, AP 42, Table 13.2.2-2, 11/06)	0.9	
b = constant = 0.45 (Value for PM2.5, AP 42, Table 13.2.2-2, 11/06)	0.45	
Control Efficiency = 50% (Water spray or chemical dust suppressant)	50	**%**
Calculation: (8760 hrs/yr) * (0.21 VMT/hr) * (0.34 lb/VMT) * (ton/2000 lb) = 0.31 tons/yr (Uncontrolled Emissions)	0.31	**tons/yr**
Calculation: (8760 hrs/yr) * (0.21 VMT/hr) * (0.15 lbs/VMT) * (ton/2000 lb) * (Control Efficiency)= 0.16 tons/yr (Controlled Emissions)	0.16	**tons/yr**

Diesel Engine Generator

Note: Emissions are based on the power output of the engine (831 hp).

Operational Capacity of Engine = 831 hp	831	**hp**
Hours of Operation = 8,760.00 hours	8760	**hours**

PM Emissions:

PM Emissions = 1.20 ton/yr (Assume all PM < 1.0 um)	1.20	**ton/yr**
PM Emissions = 2,393.50 lbs/yr (Assume all PM < 1.0 um)	2393.50	**lbs/yr**

PM-10 Emissions:

Emission Factor = 0.0003287973612 lbs/hp-hr (40 CFR 89 Table 1 7/2005-- Tier 2 engine)	0.00033	**lbs/hp-hr**
Calculation: (831 hp) * (8,760 hours) * (0.0003287973612 lbs/hp-hr) * (ton/2000 lb) = 1.20 ton/yr	1.20	**ton/yr**
Calculation: (831 hp) * (8,760 hours) * (0.0003287973612 lbs/hp-hr) = 2,393.50 lbs/yr	2393.50	**lbs/yr**

PM2.5 Emissions

Emission Factor = 0.0003287973612 lbs/hp-hr (40 CFR 89 Table 1 7/2005-- Tier 2 engine)	0.00033	**lbs/hp-hr**
Calculation: (831 hp) * (8,760 hours) * (0.0003287973612 lbs/hp-hr) * (ton/2000 lb) = 1.20 ton/yr	1.20	**ton/yr**
Calculation: (831 hp) * (8,760 hours) * (0.0003287973612 lbs/hp-hr) = 2,393.50 lbs/yr	2393.50	**lbs/yr**

NOx Emissions:

Emission Factor = 0.0151246786152 lbs/hp-hr	0.01513	**lbs/hp-hr**
Calculation: (831 hp) * (8,760 hours) * (0.0151246786152 lbs/hp-hr) * (ton/2000 lb) = 55.05 ton/yr	55.05	**ton/yr**
Calculation: (831 hp) * (8,760 hours) * (0.0151246786152 lbs/hp-hr) = 110,101.01 lbs/yr	110101.01	**lbs/yr**

CO Emissions:

Emission Factor = 0.0068 lbs/hp-hr	0.0068	**lbs/hp-hr**
Calculation: (831 hp) * (8,760 hours) * (0.0068 lbs/hp-hr) * (ton/2000 lb) = 24.75 ton/yr	24.75	**ton/yr**
Calculation: (831 hp) * (8,760 hours) * (0.0068 lbs/hp-hr) = 49,501.01 lbs/yr	49501.01	**lbs/yr**

VOC Emissions:

Emission Factor = 0.0025141 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, TOC, Exhaust & Crankcase, 10/96)	0.00251	**lbs/hp-hr**
Calculation: (831 hp) * (8,760 hours) * (0.0025141 lbs/hp-hr) * (ton/2000 lb) = 9.15 ton/yr	9.15	**ton/yr**
Calculation: (831 hp) * (8,760 hours) * (0.0025141 lbs/hp-hr) = 18,301.54 lbs/yr	18301.54	**lbs/yr**

SOx Emissions:

Emission Factor = 0.00205 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	0.00205	**lbs/hp-hr**
Calculation: (831 hp) * (8,760 hours) * (0.00205 lbs/hp-hr) * (ton/2000 lb) = 7.46 ton/yr	7.46	**ton/yr**
Calculation: (831 hp) * (8,760 hours) * (0.00205 lbs/hp-hr) = 14,923.10 lbs/yr	14923.10	**lbs/yr**

V. Existing Air Quality

This permit is for a portable facility to be located in Section 7, Township 9 South, Range 41 East in Big Horn County, Montana. Big Horn County, and in those areas for which this facility is permitted to operate, have been designated unclassified/attainment with all ambient air quality standards, and where there are no major air pollution sources in the surrounding area.

VI. Air Quality Impacts

This permit contains conditions and limitations that would protect air quality for the site and surrounding area. Furthermore, this facility is a portable source that would operate on an intermittent and temporary basis, so any effects to air quality will be minor and of limited duration.

VII. Ambient Air Impact Analysis

Based on the information provided and the conditions established in MAQP #5149-00, the Department determined that the impact from this permitting action will be minor.

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

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

Analysis Prepared By: L. Patterson
Date: 9/14/2015

DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air Resources Management Bureau
P.O. Box 200901, Helena, MT 59620
(406) 444-3490

DRAFT ENVIRONMENTAL ASSESSMENT (EA)

Issued To: Mullinax Concrete

Montana Air Quality Permit number (MAQP): 5149-00

Preliminary Determination Issued: September 24, 2015

1. *Legal Description of Site*: The initial location of the proposed portable crushing, screening and washing facility will be located at Section 7, Township 9 South, Range 59 East, Big Horn County, Montana. However, MAQP 5149-00 applies while operating at any location in Montana, except those areas having a Department of Environmental Quality (Department)-approved permitting program, areas considered tribal lands, or areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) nonattainment areas. A Missoula County air quality permit will be required for locations within Missoula County, Montana. An addendum will be required for locations in or within 10 km of certain PM_{10} nonattainment areas.

2. *Description of Project*: The Department received a permit application from Mullinax for the operation of a portable crushing/screening facility with a combined maximum rated design process rate of 200 tons per hour (TPH) of crushing and screening capacity. Mullinax proposes to utilize a portable diesel-fired engine generator set to supply electrical power to the plant. The application proposed the use of one diesel-fired generator set to provide electrical power to equipment with a maximum rated design capacity of 831 horsepower (hp).

3. *Objectives of Project*: The project objective would be to produce business and revenue for the company through the sale and use of aggregate. The issuance of MAQP #5149-00 would allow Mullinax to operate the permitted equipment at various throughout Montana (as described above), including the proposed initial site location.

4. *Alternatives Considered*: In addition to the proposed action, the Department also considered the "no-action" alternative. The "no-action" alternative would deny issuance of the air quality MAQP to the proposed facility. However, the Department does not consider the "no-action" alternative to be appropriate because Mullinax has demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the "no-action" alternative was eliminated from further consideration.

5. *A Listing of Mitigation, Stipulations, and Other Controls*: A list of enforceable conditions, including a BACT analysis, would be included in MAQP #5149-00.

6. *Regulatory Effects on Private Property*: The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.

7. *The following table summarizes the potential physical and biological effects of the proposed project on the human environment. The "no-action" alternative was discussed previously.*

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

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

A. Terrestrial and Aquatic Life and Habitats

This permitting action would be expected to have a minor effect on terrestrial and aquatic life and habitats, as the proposed plant would operate within an agriculture area. Furthermore, the air emissions would likely have only minor effects on terrestrial and aquatic life because facility emissions would be well dispersed in the area of the operation (see Section 7.F of this EA) and would have intermittent and seasonal operations. Therefore, only minor and temporary effects to terrestrial and aquatic life and habitat would be expected from the proposed project.

B. Water Quality, Quantity and Distribution

Water would be required for dust suppression on the mineral processing equipment and surround facility area. The water sue would be expected to cause minor, if any, impacts to water sources. In addition, the facility would emit air pollutants and corresponding deposition of pollutants would occur, as described in Section 7.F of this EA. However, the Department determined that, due to dispersion characteristics of pollutants and conditions that would be placed in MAQP #5149-00, any impacts from deposition of pollution on water quality, quantity, and distribution expected would be minor.

C. Geology and Soil Quality, Stability and Moisture

Only minor impacts from deposition on soil would likely result (as described in Section 7.F of this EA) and only minor amounts of water would be used for pollution control, and only as necessary, in controlling particulate emission. Thus, only minimal water runoff would likely occur. Since only minor amount of pollution would be expected and corresponding emission would be widely dispersed before settling upon surrounding soil and vegetation (as described in Section 7.D of this EA), impacts would be minor. Therefore, any effects upon geology and soil quality, stability and moisture from air pollutant emissions from equipment operations would likely be minor and short-lived.

D. Vegetation Cover, Quantity, and Quality

Only minor impacts would be expected to occur on vegetation cover, quality, and quantity because the facility would operate in an area where vegetation has been previously disturbed. During operations, the would likely be a relatively minor source of emission and the pollutants widely dispersed (as described in 7.F of this EA) therefore, deposition on vegetation from the proposed project would be expected to be minor. Also, due to limited water usage (as described in Section 7.F) and minimal associated disturbance from the application of water and run-off (as described in Section 7.B), corresponding vegetative impacts would likely by minor.

E. Aesthetics

The proposed project would be 1370 acres. The crushing/screening facility will not disturb any land as it is operating within an open pit. Activity within the facility will create noise while operating at the proposed site. The proposed project is on private land owned by Ambre Energy and public access is not allowed. The application states the nearest home and/or structure is 2.3 miles from the proposed project site, therefore visual and noise impacts would be minor and short lived. The facility would operate on an intermittent and seasonal basis.

F. Air Quality

Air quality impacts from the proposed project would be likely be minor because the facility would operate on an intermittent and temporary basis. MAQP#5149-00 includes conditions limiting the facility's opacity and requiring water and spray bars to be available on site to ensure compliance with opacity standards. These conditions would limit fugitive emissions. Further, Mullinax is a minor source of emissions with respect to Title V. Pollutant deposition from the facility would be expected to be minimal because the pollutants are widely dispersed (from factors such as wind speed and wind direction) and exhibit minimal deposition on the surrounding area. Therefore, air quality impacts from operating the facility in this area would be expected to be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The Department contacted the Montana Natural Heritage Program (MNHP) in an effort to identify species of concern that may be found in the area where the initial proposed crushing/screening facility will occur. Search results have concluded there is 12 animal species of concern in the area. Area, in this case, would be defined by the township and

range of the propose site, with an additional one mile buffer. The known species of concern is the Great Blue Heron, Golden Eagle, Greater Sage-Grouse, Yellow-billed Cuckoo, Brewer's Sparrow, Little Brown Myotis, Hoary Bat, Black-tailed Prairie Dog, Snapping Turtle, Greater Short-horned Lizard, Plain Hog-nosed Snake and the Western Milkshake. Effects of operating the proposed project in this area would be minor since the project is small, temporary, and operates on an intermittent basis. Therefore, the Department determined that any effects upon these species would likely be minor and short-lived.

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

Due to the relatively small size of the project, only small demands on environmental resources would likely be required for proper operation. Only small quantities of water are required for dust suppression of particulate emission being generated at the site. In addition, impacts to air resources would be expected to be minor because the source would be expected to be minor because the source would be considered a minor industrial source of emissions, with intermittent and seasonal operations, and because air pollutants generated by the facility would be widely dispersed as described in Section 7.F. Furthermore, Mullinax is a minor source of emissions with respect to Title V.

I. Historical and Archaeological Sites

The Department contacted the Montana History Society State Historical Prevention Office (SHPO) in an effort to identify any historical and/or archaeological sites that may be present in the proposed area of construction and operation. No archaeological sites are known to be present. No structures would be expected to be removed or altered as result of issuance of MAQP #5149-00, no impacts to known historically significant sites would be expected. It should be noted that the State Historical Preservation Office maintains the position that any structure over fifty years of age is considered historic and is potentially eligible for listing on the National Register of Historic Places. If any structures are to be altered and are over fifty years old, they would recommend that they be recorded and a determination of their eligibility be made. As long as there would be no disturbance or alternation to structures over fifty years of age, SHPO states there is a low likelihood cultural properties will be impacted.

J. Cumulative and Secondary Impacts

The operation of the proposed project would likely cause minor cumulative and secondary impacts to the physical and biological aspects of the human environmental because the facility would generate air emissions. Noise would be generated from the site. Emissions and noise would cause minimal disturbance as the facility would be expected to operate in areas designated and used for such operations on a temporary and seasonal basis. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as outlined in MAQP#5149-00. Overall, any cumulative and/secondary impacts to the physical and biological aspects of the human environment would be minor.

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

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

SUMMARY OF COMMENTS ON POTENTIAL ECONOMIC AND SOCIAL EFFECTS: The following comments have been prepared by the Department.

A. Social Structures and Mores

The operation of the proposed project would not be expected to cause any disruption to the social structures and mores in the area because the source would be a minor industrial source in a relatively remote location. The facility would only have intermittent operations. Further, the facility would be required to operate according to the conditions that would be placed in MAQP#5149-00. Therefore, the existing social structures and mores would not be affected as a result of the permitting action.

B. Cultural Uniqueness and Diversity

The impact to cultural uniqueness and diversity of these areas would be minor from the proposed equipment because the site will be located in an area that is an existing industrial site owned by Mullinax where access is secure and controlled. Additionally, the facility would be considered a portable source with seasonal and intermittent operations. Therefore, the Department determined that there would be minor effects to cultural uniqueness and diversity.

C. Local and State Tax Base and Tax Revenue

The proposed project would have little, if any impact on the local and state tax base and tax revenue. The facility would be a minor industrial source of emissions and would have seasonal intermittent operations. Thus, only minor impacts to the local and state tax base and revenue would be expected from the employees and facility production. The impacts to local tax base and revenue would be expected to be minor as the source would be portable and the money generated for taxes would be widespread.

D. Agricultural or Industrial Production

The operation of the proposed project would have only a minor impact on local industrial production since the facility would be a minor source of air emissions (by industrial standards). There would be minimal air pollution deposition on the surrounding land (as described in Section 7.F), only minor and temporary effects on the surrounding vegetation would occur. In addition, the facility operations would be temporary in nature and would be permitted with operational conditions that would minimize impacts upon surrounding vegetation, as described in Section 7.D.

E. Human Health

MAQP#5149-00 would incorporate conditions to ensure the crushing/screening facility would operate in compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective in regards to human health. As described in Section 7.F, the air emissions from the facility would be minimized by the use of water spray and other conditions established in MAQP #5149-00. Therefore, only minor impacts would be expected upon human health from proposed crushing/screening facility.

F. Access to and Quality of Recreational and Wilderness Activities

Based on the information received from Mullinax, no recreational activities or wilderness areas are near the proposed project site. No access to the public is available on the land privately owned by Ambre Energy where the proposed project would be located. Therefore, no impacts to the access to and quality of the recreational and wilderness activities would be expected.

G. Quantity and Distribution of Employment

The portable crushing/screening operation would only require a few employees to operate and would have seasonal and intermittent operations. The crushing/screening operation would be considered a portable source and would not be expected to have long-term impacts upon the quantity and distribution of employment in any given area of operation. The application states the three to seven employees would be employed as a result of the proposed project. Therefore, minor effects upon the quantity and distribution of employment in these areas would be expected.

H. Distribution of Population

The portable crushing/screening operation is a portable industrial facility that would only require a limited number of employees. No individuals would be expected to permanently relocate to this area as a result of operating the crushing/screening facility. Therefore, the proposed project would not likely impact the normal population distribution in the initial area of operation or any future operating site.

I. Demands for Government Services

Minor increases would be seen in traffic on existing roadways in the area while the crushing/screening facility operates. In addition, government services would be required for acquiring the appropriate permits from government agencies. Demands for government services would be minor.

J. Industrial and Commercial Activity

The operation of the crushing/screening facility would represent only a minor increase in the industrial activity in the proposed area of operation because the source would be a relatively small industrial source that would be portable and temporary in nature. Therefore, only limited additional industrial or commercial activity would be expected as result of the proposed operation.

K. Locally Adopted Environmental Plans and Goals

Mullinax would be allowed, by MAQP#5149-00, to operate in areas designated by Environmental Protection Agency as attainment or unclassified for ambient air quality. MAQP#5149-00 contains operational restrictions for protecting air quality and to keep facility emissions in compliance with any applicable ambient air quality standards, as a locally adopted environmental plan or goal for operating at this proposed site. The facility would be a portable source and would like have intermittent and seasonal operations. Any impacts from the project would be expected to be minor and short-lived.

L. Cumulative and Secondary Impacts

The operation of the facility would cause only minor cumulative and secondary impacts to the social and economic aspects of the human environment in the immediate area of operations because the source would be a portable and temporary source. Minor increases in traffic would have minor effects on local traffic in the immediate area. The source is relatively small and temporary; only minor economic impacts to the local economy would be expected from operating the facility. This facility may be operated in conjunction with other equipment owned by Mullinax, but any cumulative impacts upon the social and economic aspects of the human environment would likely be minor and short-lived. Thus, only minor and temporary cumulative effects would be expected to be local economy.

Recommendation: No Environmental Impact Statement (EIS) is required.

The current permitting action is for the construction and operation of a portable crushing and screening facility MAQP #5149-00 includes conditions and limitations to ensure the facility will operate in compliance with all applicable rules and regulations. In addition, there are no significant impacts associated with this proposal.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

Individuals or groups contributing to this EA: Department of Environmental Quality – Air Quality Bureau, Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

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