



Montana Department of
ENVIRONMENTAL QUALITY

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December 19, 2011

Mr. Jay Morrell
JME Companies of Monticello, Inc.
1401 Fallon Avenue
Monticello, MN 55362

Dear Mr. Morrell:

Montana Air Quality Permit #4696-00 is deemed final as of December 17, 2011, by the Department of Environmental Quality (Department). This permit is for a portable concrete batch plant and associated equipment. 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

Doug Kuenzli
Environmental Science Specialist
Air Resources Management Bureau
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VW:DCK
Enclosure

Montana Department of Environmental Quality
Permitting and Compliance Division

Montana Air Quality Permit #4696-00

JME Portable Ready Mix Concrete Plant
1401 Fallon Avenue
Monticello, MN 55362

December 17, 2011



MONTANA AIR QUALITY PERMIT

Issued To: JME Portable Ready Mix
Concrete Plant
1401 Fallon Avenue
Monticello, MN 55362

MAQP: #4696-00
Application Complete: 11/03/2011
Preliminary Determination Issued: 11/04/2011
Department's Decision Issued: 12/01/2011
Permit Final: 12/17/2011
AFS#: 777-4696

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

Section I: Permitted Facilities

A. Permitted Equipment

JME proposes to operate a portable concrete batch plant 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 concrete batch plant will be the Northwest (NW) ¼ of the Northeast (NE) ¼ of Section 3, Township 35 North, Range 4 West, in Toole County, Montana. MAQP #4696-00 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 (PM₁₀) 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 PM₁₀ nonattainment areas.

Section II: Conditions and Limitations

A. Emission Limitations

1. JME shall not cause or authorize to be discharged into the atmosphere from the portable concrete batch plant any emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).
2. JME shall not cause or authorize to be discharged into the atmosphere from any other associated equipment, used in conjunction with this facility, any visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304 and ARM 17.8.752).
3. JME shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308 and ARM 17.8.752).
4. JME shall treat all unpaved portions of the haul roads, access roads, parking lots, or the general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.3 (ARM 17.8.752).

5. Water and spray bars shall be available on site and used, as necessary, to maintain compliance with the opacity limitations in Sections II.A.1, II.A.2, and II.A.3 (ARM 17.8.749 and ARM 17.8.752).
6. JME shall not operate or have on site more than one (2) diesel-fired engines. The combined maximum design capacity of the engines shall not exceed 198 horsepower (hp) (ARM 17.8.749).
7. If the permitted equipment is used in conjunction with any other equipment owned or operated by JME, 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).
8. JME 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. All compliance tests shall be conducted in accordance with 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 truck mix concrete batch 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 17.8.749 and ARM 17.8.765).
2. JME 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 JME as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).
3. JME 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).

4. JME 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).

Section III: General Conditions

- A. Inspection – JME 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 JME fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving JME 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 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 JME 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. JME 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
JME Portable Ready Mix Concrete Plant
MAQP #4696-00

I. Introduction/Process Description

A. Permitted Equipment

JME of Monticello, Inc. owns and operates the JME Portable Ready Mix Concrete Plant (JME) in the production of concrete batch mix with a maximum capacity of 220 cubic yards per hour (yd³/hr). The following list of permitted equipment is based on information provided within the initial application and is provided for reference, certain operation flexibility is allowed and equipment may be substituted.

- 2006 Cemco 220 Mobile Batch Plant Equipment Package;
 - John Deere 4045FT270 - 99 horsepower (hp) diesel engine [Tier 2]
 - Pulse jet baghouse particulate control [silo's and weigh bin]
 - 65 ton cement storage silo
 - 85 ton cement supplement storage silo
 - 100 cubic foot (ft³) cement weigh bin
- 3 Cemco aggregate storage bins with integrated conveyors
- 2006 Ingersoll Rand G75 diesel-fired generator set [John Deere 4045TF270]
- 2009 LAARS 2.45 MMBtu/hr propane-fired low pressure boiler
- 1968 Cleaver-Brooks 5.23 MMBtu/hr fuel-oil fired package boiler
- Associated material handling equipment (conveyors, transfer points, etc.)

See Section II of the MAQP for specific details that may pertain to any equipment specific limitations or restrictions. MAQP #4696-00 is written in a de minimis friendly manner, therefore, no restrictions are established that limit the type of diesel engine that can be utilized.

B. Source Description

JME will utilize this truck-mix concrete batch plant operation and associated equipment to process aggregate and cement for the production of concrete mix for various projects. In a typical batch operation, the cement silos are filled pneumatically with 4-inch feed pipes with particulate matter captured by filling filters. The cement is gravity fed into a cement weigh hopper and then gravity fed into the mixer trucks with aggregate and water. The aggregate storage bins are filled with washed sand or washed gravel. The aggregates are gravity fed into the aggregate weigh hopper, then fed via a conveyor into the mixer trucks with cement and water. Water is metered from on-site water well located and pumped into the mixer trucks with cement and aggregate.

The initial location of the proposed portable concrete batch plant is to be the Northwest (NW) ¼ of the Northeast (NE) ¼ of Section 3, Township 35 North, Range 4 West, in Toole County, Montana. This location is not under the ownership of JME and the source will not likely occupy this site long-term; however, this proposed location will serve as the operations home location while operating within the State of Montana, until otherwise specified.

C. Additional Information

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

II. Applicable Rules and Regulations

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

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

1. ARM 17.8.101 Definitions. This rule 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).

JME 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 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 (SO₂)
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 17.8.213 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 (PM)
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.223 Ambient Air Quality Standard for Particulate Matter with an Aerodynamic Diameter of Ten Microns or Less (PM₁₀)

JME 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 are taken to control emissions of airborne particulate matter. (2) Under this rule, JME shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.
3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this section.
4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter in excess of the amount set forth in this section.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. Commencing July 1, 1971, no person shall burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of gaseous fuel, calculated as hydrogen sulfide at standard conditions.
6. ARM 17.8.340 Standard 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 JME the portable concrete batch plant and associated equipment are subject 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 F – Standards of Performance for Portland Cement Plants. This subpart does not apply because the portable truck-mix concrete batch plant does not meet the definition of a Portland Cement Plant.
- c. 40 CFR 60, Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants. This subpart does not apply because JME does not crush or grind nonmetallic minerals, and therefore does not meet the definition of a nonmetallic mineral processing plant.
- d. 40 CFR 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition (CI) Internal Combustion Engines (ICE). NSPS requirements apply to owners or operators or stationary CI ICE that commence construction, modification, or reconstruction after July 11, 2005, where the stationary CI ICE is manufactured after April 1, 2006, and is not a fire pump engine.

Based on the information submitted by JME, the diesel-fired engines associated with this permit are potentially subject to this Subpart as they were manufactured after the effective date. However, as this permit is written de minimis friendly, applicability to 40 CFR 60, Subpart IIII will depend upon the engine utilized and the location of operation.

- 7. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The source, as defined and applied in 40 CFR 63, shall comply with the requirements of 40 CFR 63, as listed below.

- a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to a National Emission Standard for Hazardous Air Pollutants (NESHAP) Subpart as listed below.
- b. 40 CFR 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). As an area source the diesel RICE will be subject to this rule. However, although diesel RICE engines are an affected source, per 40 CFR 63.5490(b)(3) they do not have any requirements unless they are new or reconstructed after June 12, 2006.

Based on the information submitted by JME, the RICE equipment to be used under MAQP #4696-00 may be subject to this subpart as the facility is an area source of Hazardous Air Pollutants (HAP) emissions and the engines have the potential to meet the definition of stationary RICE, depending upon the location and nature of operation. Since this permit is written in a de minimis-friendly manner, the area source provisions Subpart ZZZZ may apply depending upon the engine utilized and the location of operation.

- c. 40 CFR 63, Subpart JJJJJ – National Emission Standard for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources. This subpart does not apply to JME as the boilers associated with MAQP #4696-00 do not meet the definition of a stationary source under 40 CFR Subpart A.

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 section 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. JME 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 alteration to construct, alter, or use any air contaminant sources that have the Potential to Emit (PTE) greater than 15 tons per year (tpy) of any pollutant. JME has a PTE greater than 15 tpy of PM, PM₁₀, and oxides of nitrogen (NO_x); 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. JME 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. JME submitted an affidavit of publication of public notice for the October 27, 2011 issue of the *Shelby Promoter*, a newspaper of general circulation in the City of Shelby in Toole County, as proof of compliance with the public notice requirements.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that 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 JME 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 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 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 sub-chapter 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, 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 tpy of any combination of HAPs, or lesser quantity as the Department may establish by rule; or
 - c. PTE > 70 tpy of PM₁₀ in a serious PM₁₀ 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 #4696-00 for JME, the following conclusions were made:
 - a. The facility's PTE is less than 100 tpy for any pollutant.
 - b. The facility's PTE is less than 10 tpy for any one HAP and less than 25 tpy of any combination of HAPs.
 - c. This source is not located in a serious PM₁₀ nonattainment area.
 - d. This facility is potentially subject to a current NSPS (40 CFR 60, Subpart III).
 - e. This facility potentially subject to a current NESHAP standard (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 has determined that JME will be a minor source of emissions as defined under Title V. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit, JME will be required to obtain a Title V Operating Permit.

III. BACT Determination

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

A. Concrete Batch Operation

1. Particulate Emissions

JME proposed the utilization of ventilation with Fabric dust filtration equipment (baghouse) to capture and control dry particles from cement and cement supplement transfer activities and the bulk weighing operation. As the exhaust stream passes through the fabric dust filter, the dust particles are collected and retained by the fabric. A Baghouse is very efficient at removing small particles and high particulate mass loadings, with removal efficiencies commonly ranging from 95% to 99%. A baghouse can achieve high removal efficiencies and the installation and operation costs of a baghouse are considerably less than other control options. Therefore, the Department determined that the installation, operation, and maintenance of a baghouse constituted BACT in previously permitted sources similar to JME.

2. Fugitive Visible Emissions

Two types of emission controls are readily available and used for dust suppression of fugitive emissions that result from the operation of equipment and associated activities. These two control methods are water and chemical dust suppressant. Both suppressants could be used from dust control for the area surrounding the concrete plant and for emissions from the handling of aggregate materials. 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. However, JME has the option to use chemical dust suppressant to assist in controlling particulate emissions.

Furthermore, all visible emissions from concrete batch plant and other associated equipment are limited to 20% opacity. JME is required to have water spray bars and water available on site (at all times) and to apply the water, as necessary, to maintain compliance with the opacity restrictions and reasonable precautions

limitations. The Department determined that using water spray bars, water, and/or chemical dust suppressant to maintain compliance with the opacity requirements and reasonable precaution limitations constitutes BACT for the operation for the additional equipment.

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.

B. Diesel Engines

Due to the limited amount of emissions produced by the diesel engines to be used in association with MAQP #4696-00 and the lack of cost effective add-on controls, any control approach would be cost prohibitive. Therefore, the Department determined that proper operation and maintenance with no add-on controls would constitute BACT for the diesel engine.

In addition, any new diesel 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 1039), New Source Performance Standard emission limitations for stationary compression ignition engines (40 CFR 60, Subpart IIII), or National Emissions Standards for Hazardous Air Pollutant Sources for Reciprocating 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 these engines.

IV. Emission Inventory

Emission Source	Emissions Tons/Year [PTE]						
	PM	PM ₁₀	PM _{2.5}	CO	NO _x	SO _x	VOC
Aggregate Delivery - Ground Storage	6.17	2.99	--	--	--	--	--
Sand Delivery - Ground Storage	1.45	0.67	--	--	--	--	--
Aggregate Transfer to Conveyor	6.17	2.99	--	--	--	--	--
Sand Transfer to Conveyor	1.45	0.67	--	--	--	--	--
Aggregate Transfer to Elevated Storage	6.17	2.99	--	--	--	--	--
Sand Transfer to Elevated Storage	1.45	0.67	--	--	--	--	--
Cement Delivery - Unloading to Storage Silo	0.19	0.10	--	--	--	--	--
Supplement Delivery - Unloading to Storage Silo	0.29	0.19	--	--	--	--	--
Weigh Hopper - Sand/Aggregate Loading	7.61	3.66	--	--	--	--	--
Truck Mix Loading	190.00	50.99	--	--	--	--	--
Diesel Engine(s) ≤ 198 hp	1.91	1.91	1.91	5.79	26.88	1.78	2.18
LAARS Low Pressure Boiler	0.08	0.02	0.06	0.88	1.52	0.55	0.12
Cleaver-Brooks Package Boiler	0.33	0.17	0.04	0.84	3.34	11.87	0.04
Unpaved Roadways (Haul Roads)	4.20	1.16	0.12	--	--	--	--
TOTAL EMISSIONS ►	227.45	69.18	2.12	7.51	31.75	14.20	2.34
CO, carbon monoxide Cu., cubic g, grams gal, gallons gr, grains hp, horsepower lbs, pounds MMBtu, million British Thermal Units Max, maximum 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 [Sum of condensable and filterable] SO ₂ , sulfur Dioxide TPH, tons per hour TPY, tons per year VOC, volatile organic compounds yds, yards

Cemco 220 Mobile Batch Plant

Production Rate:	220 cu. yds/hour (Max)	1927200 cu. yards/year (Max)	1927200 Cu. yds/year (Allowable)
	442.6 tons/hour (Max)	3877526 tons/year (Max)	3877526 tons/year (Allowable)
Allowable Operating Hours:	8760		

Batch Plant Power: 2006 John Deere 4045TF270 diesel engine 99 hp [Tier 2]
 Supplemental Power Plant: 2006 Ingersoll Rand G75 generator-set with a John Deere 4045TF270 diesel engine 99 hp [Tier 1]
 Ancillary Equipment: 2009 LAARS 2.45 MMBtu propane fired low pressure boiler
 1968 Cleaver-Brooks Package Boiler 5.23 MMBtu N.G. or oil-fired boiler

Material Handling - Aggregate

Process Rate: 220.0 cu. yards/hour
 Operating Hours: 8760 hours/year

Aggregate Delivery to Ground Storage [SCC 3-05-011-21]

PM Emissions (uncontrolled):

Emission Factor	0.0064 lbs/cu. yard produced	[AP-42 Table 11.12-2, 6/06]	
Calculations	(0.0064 lbs/cu. yard) * (220.00 cu. yard/hour) =		1.41 lbs/hr
	(1.41 lbs/hr) * (8760 hrs/yr) *(0.005 tons/lb) =		6.17 TPY

PM₁₀ Emissions (uncontrolled):

Emission Factor	0.0031 lbs/cu. yard produced	[AP-42 Table 11.12-2, 6/06]	
Calculations	(0.0031 lbs/cu. yard) * (220.00 cu. yard/hour) =		0.68 lbs/hr
	(0.68 lbs/hr) * (8760 hrs/yr) *(0.005 tons/lb) =		2.99 TPY

Aggregate Transfer to Conveyor [SCC 3-05-011-23]

PM Emissions (uncontrolled):

Emission Factor	0.0064 lbs/cu. yard produced	[AP-42 Table 11.12-2, 6/06]	
Calculations	(0.0064 lbs/cu. yard) * (220.00 cu. yard/hour) =		1.41 lbs/hr
	(1.41 lbs/hr) * (8760 hrs/yr) *(0.005 tons/lb) =		6.17 TPY

PM₁₀ Emissions (uncontrolled):

Emission Factor	0.0031 lbs/cu. yard produced	[AP-42 Table 11.12-2, 6/06]	
Calculations	(0.0031 lbs/cu. yard) * (220.00 cu. yard/hour) =		0.68 lbs/hr
	(0.68 lbs/hr) * (8760 hrs/yr) *(0.005 tons/lb) =		2.99 TPY

Aggregate Transfer to Elevated Storage [SCC 3-05-011-04]

PM Emissions (uncontrolled):

Emission Factor	0.0064 lbs/cu. yard produced	[AP-42 Table 11.12-2, 6/06]	
Calculations	(0.0064 lbs/cu. yard) * (220.00 cu. yard/hour) =		1.41 lbs/hr
	(1.41 lbs/hr) * (8760 hrs/yr) *(0.005 tons/lb) =		6.17 TPY

PM₁₀ Emissions (uncontrolled):

Emission Factor	0.0031 lbs/cu. yard produced	[AP-42 Table 11.12-2, 6/06]	
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Calculations	$(0.0031 \text{ lbs/cu. yard}) * (220.00 \text{ cu. yard/hour}) =$	0.68 lbs/hr
	$(0.68 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.005 \text{ tons/lb}) =$	2.99 TPY

Material Handling - Sand

Process Rate: 220.0 cu. yards/hour

Operating Hours: 8760 hours/year

Sand Delivery to Ground Storage [SCC 3-05-011-22]

PM Emissions (uncontrolled):

Emission Factor	0.0015 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]	
Calculations	$(0.0015 \text{ lbs/cu. yard}) * (220.00 \text{ cu. yard/hour}) =$		0.33 lbs/hr
	$(0.33 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.005 \text{ tons/lb}) =$		1.45 TPY

PM₁₀ Emissions (uncontrolled):

Emission Factor	0.0007 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]	
Calculations	$(0.0007 \text{ lbs/cu. yard}) * (220.00 \text{ cu. yard/hour}) =$		0.15 lbs/hr
	$(0.15 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.005 \text{ tons/lb}) =$		0.67 TPY

Sand Transfer to Conveyor [SCC 3-05-11-24]

PM Emissions (uncontrolled):

Emission Factor	0.0015 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]	
Calculations	$(0.0015 \text{ lbs/cu. yard}) * (220.00 \text{ cu. yard/hour}) =$		0.33 lbs/hr
	$(0.33 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.005 \text{ tons/lb}) =$		1.45 TPY

PM₁₀ Emissions (uncontrolled):

Emission Factor	0.0007 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]	
Calculations	$(0.0007 \text{ lbs/cu. yard}) * (220.00 \text{ cu. yard/hour}) =$		0.15 lbs/hr
	$(0.15 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.005 \text{ tons/lb}) =$		0.67 TPY

Sand Transfer to Elevated Storage [SCC 3-05-011-05]

PM Emissions (uncontrolled):

Emission Factor	0.0015 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]	
Calculations	$(0.0015 \text{ lbs/cu. yard}) * (220.00 \text{ cu. yard/hour}) =$		0.33 lbs/hr
	$(0.33 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.005 \text{ tons/lb}) =$		1.45 TPY

PM₁₀ Emissions (uncontrolled):

Emission Factor	0.0007 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]	
Calculations	$(0.0007 \text{ lbs/cu. yard}) * (220.00 \text{ cu. yard/hour}) =$		0.15 lbs/hr
	$(0.15 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.005 \text{ tons/lb}) =$		0.67 TPY

Material Handling - Cement & Cement Supplement

Process Rate: 220.0 cu. yards/hour

Operating Hours: 8760 hours/year

Cement Delivery to Silo [SCC 3-05-011-07]

PM Emissions (controlled):

Emission Factor	0.0002 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]	
Calculations	$(0.0002 \text{ lbs/cu. yard}) * (220.00 \text{ cu. yard/hour}) =$		0.04 lbs/hr
	$(0.04 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.005 \text{ tons/lb}) =$		0.19 TPY

PM₁₀ Emissions (controlled):

Emission Factor 0.0001 lbs/cu. yard produced [AP-42 Table 11.12-5, 6/06]
Calculations (0.0001 lbs/cu. yard) * (220.00 cu. yard/hour) = 0.02 lbs/hr
 (0.02 lbs/hr) * (8760 hrs/yr) *(0.005 tons/lb) = 0.10 TPY

Cement Supplement (Fly Ash) Delivery to Silo [SCC 3-05-011-17]

PM Emissions (controlled):

Emission Factor 0.0003 lbs/cu. yard produced [AP-42 Table 11.12-5, 6/06]
Calculations (0.0003 lbs/cu. yard) * (220.00 cu. yard/hour) = 0.07 lbs/hr
 (0.07 lbs/hr) * (8760 hrs/yr) *(0.005 tons/lb) = 0.29 TPY

PM₁₀ Emissions (controlled):

Emission Factor 0.0002 lbs/cu. yard produced [AP-42 Table 11.12-5, 6/06]
Calculations (0.0002 lbs/cu. yard) * (220.00 cu. yard/hour) = 0.04 lbs/hr
 (0.04 lbs/hr) * (8760 hrs/yr) *(0.005 tons/lb) = 0.19 TPY

Weigh Hopper Loading [SCC 3-05-011-08]

Process Rate: 220.0 cu. yards/hour
Operating Hours: 8760 hours/year

PM Emissions (controlled):

Emission Factor 0.0079 lbs/cu. yard produced [AP-42 Table 11.12-5, 6/06]
Calculations (0.0079 lbs/cu. yard) * (220.00 cu. yard/hour) = 1.74 lbs/hr
 (1.74 lbs/hr) * (8760 hrs/yr) *(0.005 tons/lb) = 7.61 TPY

PM₁₀ Emissions (controlled):

Emission Factor 0.0038 lbs/cu. yard produced [AP-42 Table 11.12-5, 6/06]
Calculations (0.0038 lbs/cu. yard) * (220.00 cu. yard/hour) = 0.84 lbs/hr
 (0.84 lbs/hr) * (8760 hrs/yr) *(0.005 tons/lb) = 3.66 TPY

Truck Mix Loading [SCC 3-05-011-10]

Process Rate: 220.0 cu. yards/hour
 442.64 tons/hour
Operating Hours: 8760 hours/year

PM Emissions (controlled):

Emission Factor 0.0980 lbs/ton material loaded [AP-42 Table 11.2-2, 6/06]
Calculations (0.098 lbs/ton) * (442.64 tons/hour) = 43.38 lbs/hr
 (43.38 lbs/hr) * (8760 hrs/yr) *(0.005 tons/lb) = 190.00 TPY

PM₁₀ Emissions (controlled):

Emission Factor 0.0263 lbs/ton material loaded [AP-42 Table 11.2-2, 6/06]
Calculations (0.0263 lbs/ton) * (442.64 tons/hour) = 11.64 lbs/hr
 (11.64 lbs/hr) * (8760 hrs/yr) *(0.005 tons/lb) = 50.99 TPY

Diesel Engine(s):

[Basis: (1) 99 hp diesel-fired generator set; (1) 99 hp industrial diesel engine powering batch plant]

Engine Rating: 198 hp
 Fuel Input: 1.39 MMBtu/hr
 10.1 gallons/hour [Estimated]
 Operating Hours: 8760 hours/year

Particulate Emissions:

PM Emissions (uncontrolled):

Emission Factor 0.0022 lb/hp-hr [AP-42 3.3-1, 10/96]
 Calculations (0.0022 lb/hp-hr) * (198 hp) = 0.44 lbs/hr
 (0.44 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) = 1.91 TPY

PM₁₀ Emissions (uncontrolled):

Emission Factor 0.0022 lb/hp-hr [AP-42 3.3-1, 10/96]
 Calculations (0.0022 lb/hp-hr) * (198 hp) = 0.44 lbs/hr
 (0.44 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) = 1.91 TPY

PM_{2.5} Emissions (uncontrolled):

Emission Factor 0.0022 lb/hp-hr [AP-42 3.3-1, 10/96]
 Calculations (0.0022 lb/hp-hr) * (198 hp) = 0.44 lbs/hr
 (0.44 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) = 1.91 TPY

CO Emissions (uncontrolled):

Emission Factor 0.00668 lb/hp-hr [AP-42 3.3-1, 10/96]
 Calculations (0.00668 lb/hp-hr) * (198 hp) = 1.32 lbs/hr
 (1.32 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) = 5.79 TPY

NO_x Emissions (uncontrolled):

Emission Factor 0.031 lb/hp-hr [AP-42 3.3-1, 10/96]
 Calculations (0.031 lb/hp-hr) * (198 hp) = 6.14 lbs/hr
 (6.14 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) = 26.88 TPY

SO₂ Emissions (uncontrolled):

Emission Factor 0.0021 lb/hp-hr [AP-42 3.3-1, 10/96]
 Calculations (0.0021 lb/hp-hr) * (198 hp) = 0.41 lbs/hr
 (0.41 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) = 1.78 TPY

VOC Emissions (uncontrolled):

Emission Factor 0.0025 lb/hp-hr [AP-42 3.3-1, 10/96]
 Calculations (0.0025 lb/hp-hr) * (198 hp) = 0.50 lbs/hr
 (0.50 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) = 2.18 TPY

LAARS Low Pressure Boiler [SSC 1-03-010-02]

Fuel Type: Propane
 Burner Firing Rate: 2.45 MMBtu/hr
 Fuel Input: 26.78 gallons/hour [Estimated]
 Operating Hours: 8760 hrs/year

Particulate Emissions:

PM Emissions (uncontrolled):

Emission Factor 0.0077 lbs/MMBtu [AP-42 Table 1.5-1, 7/08 - converted lbs/10³ gal→lbs/MMBtu]

Calculations (0.0077 lbs/MMBtu) * (2.45 MMBtu/hr) = 0.02 lbs/hr
 (0.019 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) = 0.08 TPY

PM₁₀ Emissions (uncontrolled):

Emission Factor 0.0022 lbs/MMBtu [AP-42 Table 1.5-1, 7/08 - converted lbs/10³ gal→lbs/MMBtu]
 Calculations (0.0022 lbs/MMBtu) * (2.45 MMBtu/hr) = 0.005 lbs/hr
 (0.005 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) = 0.02 TPY

PM_{2.5} Emissions (uncontrolled):

Emission Factor 0.0055 lbs/MMBtu [AP-42 Table 1.5-1, 7/08 - converted lbs/10³ gal→lbs/MMBtu]
 Calculations (0.0055 lbs/MMBtu) * (2.45 MMBtu/hr) = 0.01 lbs/hr
 (0.013 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) = 0.06 TPY

CO Emissions (uncontrolled):

Emission Factor 0.0820 lbs/MMBtu [AP-42 Table 1.5-1, 7/08 - converted lbs/10³ gal→lbs/MMBtu]
 Calculations (0.0820 lbs/MMBtu) * (2.45 MMBtu/hr) = 0.20 lbs/hr
 (0.201 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) = 0.88 TPY

NO_x Emissions (uncontrolled):

Emission Factor 0.1421 lbs/MMBtu [AP-42 Table 1.5-1, 7/08 - converted lbs/10³ gal→lbs/MMBtu]
 Calculations (0.1421 lbs/MMBtu) * (2.45 MMBtu/hr) = 0.35 lbs/hr
 (0.348 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) = 1.52 TPY

SO₂ Emissions (uncontrolled):

Emission Factor 0.0011 *(S) lbs/MMBtu [AP-42 Table 1.5-1, 7/08 - converted lbs/10³ gal→lbs/MMBtu]
 Calculations (0.0011 lbs/MMBtu) * (47.06) * (2.45 MMBtu/hr) = 0.13 lbs/hr
 (0.126 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) = 0.55 TPY
Basis: Sulfur content (S) based on ARM 17.8.322(5) limit of 50 gr/100ft³ as H₂S → 47.06 gr/100ft³ as S

VOC Emissions (uncontrolled):

Emission Factor 0.0109 lbs/MMBtu [AP-42 Table 1.5-1, 7/08 - converted lbs/10³ gal→lbs/MMBtu]
 Calculations (0.0109 lbs/MMBtu) * (2.45 MMBtu/hr) = 0.03 lbs/hr
 (0.027 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) = 0.12 TPY

Cleaver-Brooks CB Package Boiler [SCC 1-02-005-03]

Fuel Type: Diesel Fuel [0.5% wgt. Sulfur]
 Fuel Input: 38.17 gallons/hour [Estimated]
 5.23 MMBtu/hr
 Operating Hours: 8760 hrs/year

Particulate Emissions:

PM Emissions (uncontrolled):

Emission Factor 0.002 lbs/gal [AP-42 Table 1.3-1, 5/10]
 Calculations (0.002 lbs/gal) * (38.17 gal/hr) = 0.076 lbs/hr
 (0.076 lbs/hr) * (8760 hours/year) * (0.0005 tons/lb) = 0.33 TPY

PM₁₀ Emissions (uncontrolled):

Emission Factor 0.001 lbs/gal [AP-42 Table 1.3-6, 5/10]
 Calculations (0.001 lbs/gal) * (38.17 gal/hr) = 0.04 lbs/hr
 (0.038 lbs/hr) * (8760 hours/year) * (0.0005 tons/lb) = 0.17 TPY

PM_{2.5} Emissions (uncontrolled):

Emission Factor	0.00025 lbs/gal	[AP-42 Table 1.3-6, 5/10]	
Calculations	(0.00025 lbs/gal) * (38.17 gal/hr) =		0.01 lbs/hr
	(0.010 lbs/hr) * (8760 hours/year) * (0.0005 tons/lb) =		0.04 TPY

CO Emissions (uncontrolled):

Emission Factor	0.005 lbs/gal	[AP-42 Table 1.3.1, 5/10]	
Calculations	(0.005 lbs/gal) * (38.17 gal/hr) =		0.19 lbs/hr
	(0.191 lbs/hr) * (8760 hours/year) * (0.0005 tons/lb) =		0.84 TPY

NO_x Emissions (uncontrolled):

Emission Factor	0.02 lbs/gal	[AP-42 Table 1.3.1, 5/10]	
Calculations	(0.02 lbs/gal) * (38.17 gal/hr) =		0.76 lbs/hr
	(0.763 lbs/hr) * (8760 hours/year) * (0.0005 tons/lb) =		3.34 TPY

SO₂ Emissions (uncontrolled):

Emission Factor	0.142 *(S) lbs/gal	[AP-42 Table 1.3.1, 5/10]	
Calculations	(0.142 lbs/gal) * (0.5) * (14.60 gal/hr) =		2.71 lbs/hr
	(2.710 lbs/hr) * (8760 hours/year) * (0.0005 tons/lb) =		11.87 TPY

VOC Emissions (uncontrolled):

Emission Factor	0.00025 lbs/gal	[AP-42 Table 1.3.3, 5/10]	
Calculations	(0.00025 lbs/gal) * (38.17 gal/hr) =		0.01 lbs/hr
	(0.010 lbs/hr) * (8760 hours/year) * (0.0005 tons/lb) =		0.04 TPY

Unpaved Roadways (Haul Roads)

Miles Travelled: 5 Miles/Day [Estimate]
Vehicle Weight: 27.5 Tons [Mean Vehicle Weight Empty/Full]
Control Method: Water Application
Control Efficiency (Ce): 50%

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 PM10 =	1.5 [AP-42 Table 13.2.2-2, 11/06]	
	k, Empirical Constant PM2.5 =	0.15 [AP-42 Table 13.2.2-2, 11/06]	
	s, Surface Material Silt Content (%) =	7.1 [AP-42 Table 13.2.2-1, 11/06]	
	W, Mean Vehicle Weight (tons) =	27.5 [Applicant Provided Data]	
	a, Empirical Constant PM =	0.7 [AP-42 Table 13.2.2-2, 11/06]	
	a, Empirical Constant PM10 /PM2.5 =	0.9 [AP-42 Table 13.2.2-2, 11/06]	
	b, Empirical Constant PM - PM2.5 =	0.45 [AP-42 Table 13.2.2-2, 11/06]	

PM Emissions (controlled):

Emission Factor	$EF = 4.9 * (7.1/12)^{0.7} * (27.5/3)^{0.45} =$	9.20 lbs/VMT	
Calculations	(9.20 lbs/VMT) * (5 miles/day) * (1 - 0.5 Ce) =		22.99 lbs/day
	(22.99 lbs/day) * (365 days/yr) * (0.0005 tons/lb) =		4.20 TPY

PM₁₀ Emissions (controlled):

Emission Factor	$EF = 1.5 * (7.1/12)^{0.9} * (27.5/3)^{0.45} =$	2.53 lbs/VMT	
Calculations	$(2.53 \text{ lbs/VMT}) * (5 \text{ miles/day}) * (1 - 0.5 \text{ Ce}) =$		6.34 lbs/day
	$(6.34 \text{ lbs/day}) * (365 \text{ days/yr}) * (0.0005 \text{ tons/lb}) =$		1.16 TPY

PM_{2.5} Emissions (controlled):

Emission Factor	$EF = 0.15 * (7.1/12)^{0.9} * (27.5/3)^{0.45} =$	0.25 lbs/VMT	
Calculations	$(0.25 \text{ lbs/VMT}) * (5 \text{ miles/day}) * (1 - 0.5 \text{ Ce}) =$		0.63 lbs/day
	$(0.63 \text{ lbs/day}) * (365 \text{ days/yr}) * (0.0005 \text{ tons/lb}) =$		0.12 TPY

V. Existing Air Quality

The initial location of the proposed portable concrete batch plant is to be the NW ¼ of the NE ¼ of Section 3, Township 35 North, Range 4 West, in Toole County, Montana. The initial location and those areas for which this facility is permitted to operate under MAQP #4696-00 have been designated unclassified/attainment with all ambient air quality standards and there are no major air pollution sources in the surrounding area.

VI. Air Quality Impacts

MAQP #4696-00 will cover the plant while operating at any location within Montana, excluding 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 PM₁₀ nonattainment areas.

Emissions generated from the operation of this source are to be well control and limited, furthermore, the portable unit would be expected to be operated on an intermittent and seasonal basis and any air quality impacts would be expected to be minimal and temporary. The Department determined that the impact from this permitting action will be minor and is not expected to cause or contribute to a violation of any ambient air quality standard.

VII. Ambient Air Quality Impacts

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

VIII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, MCA, the Department conducted the following private property taking and damaging assessment.

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)].

YES	NO	
		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: D. Kuenzli
Date: October 24, 2011

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

FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued To: JME Portable Ready Mix Concrete Plant
1401 Fallon Avenue
Monticello, MN 55362

Montana Air Quality Permit Number (MAQP): 4696-00

Preliminary Determination Issued: 11/04/2011

Department Decision Issued: 12/01/2011

Permit Final: 12/17/2011

1. *Legal Description of Site:* JME Portable Ready Mix Concrete Plant proposes to operate a portable truck-mix concrete batch plant, which will initially be located in the Northwest (NW) ¼ of the Northeast (NE) ¼ of Section 3, Township 35 North, Range 4 West, in Toole County, Montana. However, MAQP #4696-00 applies while operating at any location in Montana, except those areas having a Department-approved permitting program, areas considered tribal lands, or areas in or within 10 kilometers (km) of certain PM₁₀ nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* An addendum would be required for locations in or within 10 km of certain PM₁₀ nonattainment areas.
2. *Description of Project:* The Department received a permit application from JME for the operation of a portable concrete batch plant with a maximum rated design process rate of 220 cubic yards/hour (yd³/hr) of concrete mix production. Concrete batch equipment utilized is consistent with operation of similar application. Equipment includes; the truck mix batch equipment, cement and cement supplement storage silos, and miscellaneous aggregate storage and handling equipment. Associated fossil-fuel fired equipment includes; a single industrial diesel engine driving the batch operation, a single diesel-fired generator, a propane-fired low pressure boiler, and a fuel oil fired boiler.
3. *Objectives of Project:* The object of the project would be to produce business and revenue for the company through the sale and use of concrete mix. The issuance of MAQP #4696-00 would allow JME to operate the permitted equipment at various locations throughout Montana (as described above), including the proposed initial site location.
4. *Alternatives Considered:* In addition to the proposed action, the Department considered the "no-action" alternative. The "no-action" alternative would deny issuance of the MAQP to the proposed facility. However, the Department does not consider the "no-action" alternative to be appropriate because JME 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 listing of the enforceable permit conditions and a permit analysis, including a BACT analysis, would be contained in MAQP #4696-00.
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 the permit conditions would be reasonably necessary to ensure compliance with applicable requirements and to demonstrate compliance with those requirements and would 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 project would affect an existing, industrial property that has already been disturbed. 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 operations (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 surrounding roadways and general facility area and to supply the portable wash plant. This water use would be expected to only cause minor, if any, impacts to water resources because the facility is small and only a small volume of water would be required to be used. In addition, the facility would emit air pollutants, and corresponding deposition of pollutants would occur, as described in Section 7.F. of this EA. The Department has determined that, due to dispersion characteristics of pollutants and conditions that would be placed in MAQP #4696-00, any impacts from deposition of pollutants on water quality, quantity, and distribution expected would be minor.

C. Geology and Soil Quality, Stability, and Moisture

Only minor impacts from deposition of air pollutants on soils 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 emissions. Thus, only minimal water runoff would likely occur. Since only minor amounts of pollution would be expected and corresponding emissions would be widely dispersed before settling upon

surrounding soils 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 vegetative cover, quality, and quantity because the facility would operate in an area where vegetation has been previously disturbed. During operations, the facility would likely be a relatively minor source of emissions and the pollutants widely dispersed (as described in Section 7.F of this EA); therefore, deposition on vegetation from the proposed project would expect to be minor. Also, due to limited water usage (as described in Section 7.B of this EA) and minimal associated soil disturbance from the application of water and water runoff (as described in Section 7.C of this EA), corresponding vegetative impacts would likely be minor.

E. Aesthetics

The operation of the facility would be visible and would create noise while operating at the proposed site. However, MAQP #4696-00 would include conditions to control emissions, including visible emissions, from the plant. The facility would be portable, would operate on an intermittent and seasonal basis, and would be a small industrial source. Therefore, any visual aesthetic impacts would be short-lived and are expected to be minor.

F. Air Quality

Air quality impacts from the proposed project would likely be minor because the facility would be relatively small and operate on an intermittent and temporary basis. MAQP #4696-00 includes conditions limiting the facility's opacity; require water and water spray bars be available on site and used to ensure compliance with opacity standards; and limit the facility's production capacity.

Further, the Department determined that this facility would be a minor source of emissions as defined under the Title V Operating Permit Program because the source's potential to emit is limited to below the major source threshold level of 100 tons per year (tpy) for any regulated pollutant. Pollutant deposition from the facility would expect to be minimal because the pollutants emitted 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 plant in this area would be expected to be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The Department, in an effort to assess any potential impacts to any unique endangered, fragile, or limited environmental resources in the initial proposed area of operation (NW ¼ of the NE ¼ of Section 3, Township 35 North, Range 4 West, in Toole County, Montana.), contacted the Natural Resource Information System – Montana Natural Heritage Program. Search results concluded there are two species of concern within the area. The search area, in this case, is defined by the section, township, and range of the proposed site, with an additional one (1) mile buffer. The known species of concern include the vertebrate animals: the Ferruginous Hawk (Sensitive) and the Golden Eagle (Sensitive).

While these species may be found within the search area, these animals may have many miles of potential habitat. Specific effects of operating the plant in this area would be minor since the facility is relatively small in size and located within an area of existing construction. In

addition the source will have only seasonal and intermittent operations in the area. Therefore, the Department determined that any effects upon these species would likely be minor and short-lived.

H. Demands on Environmental Resources 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 emissions being generated at the site. In addition, impacts to air resources 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 of this EA. Energy requirements would also be small, as the diesel engines would use small amounts of fuel. Overall, any impacts to water, air, and energy resources would likely be minor.

I. Historical and Archaeological Sites

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

Based on information received from the applicant, the proposed project sites have been previously disturbed in accordance with current mining permits held by the applicant.

J. Cumulative and Secondary Impacts

The operation of the concrete batch plant would likely cause minor cumulative and secondary impacts to the physical and biological aspects of the human environment because the facility would be limited in the amount of emissions allowed to be released to the atmosphere. Emissions and noise generated from the equipment would likely result in only minor impacts to the area of operations because the operation of the concrete batch plant would be seasonal and temporary. The proposed project would be short-term in nature, and likely have minor cumulative effects upon resources within the area. These resources include water, terrestrial and aquatic life, soils, and vegetation. Overall, cumulative and secondary impacts to the physical and biological aspects of the human environment would likely 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			X			Yes
D	Agricultural or Industrial Production			X			Yes
E	Human Health			X			Yes
F	Access to and Quality of Recreational and Wilderness Activities				X		Yes
G	Quantity and Distribution of Employment				X		Yes
H	Distribution of Population				X		Yes
I	Demands for Government Services			X			Yes
J	Industrial and Commercial Activity			X			Yes
K	Locally Adopted Environmental Plans and Goals			X			Yes
L	Cumulative and Secondary Impacts			X			Yes

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

A. Social Structures and Mores

The operation of the concrete batch plant would expect to cause no disruption to the social structures and mores in the area because the source would be a minor industrial source of emissions and would only have temporary and intermittent operations. Further, the facility would be required to operate according to the conditions that would be placed in MAQP #4696-00, which would limit the effects to social structures and mores.

B. Cultural Uniqueness and Diversity

The cultural uniqueness and diversity of this area would not likely be impacted by the operation of the proposed plant because the facility is a portable source, with seasonal and intermittent operations. Therefore, there would not be any impacts expected to the cultural uniqueness and diversity of this.

C. Local and State Tax Base and Tax Revenue

The operation of the concrete batch plant would likely have little, if any, impact on the local and state tax base and tax revenue because the facility would be a minor industrial source of emissions and would have seasonal and intermittent operations. The facility would require the use of only 4 employees. Thus, only minor impacts to the local and state tax base and revenue would be expected from the employees and facility production. Furthermore, the impacts to local tax base and revenue would be minor because the source would be portable and the money generated for taxes would be widespread.

D. Agricultural or Industrial Production

The operation of the concrete batch plant would have only a minor impact on local industrial production since the facility would be a minor source of air emissions. Because minimal deposition of air pollutants would occur on the surrounding land (as described in Section 7.F of this EA), only minor and temporary effects on the surrounding vegetation (i.e. agricultural production) would occur. In addition, the facility operations would be small and temporary in nature and would be permitted with operational conditions and limitations that would minimize impacts upon surrounding vegetation, as described in Section 7.D of this EA.

E. Human Health

MAQP #4696-00 would incorporate conditions to ensure that the concrete batch plant would operate in compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health. As described in Section 7.F. of this EA, the air emissions from this facility would be minimized by the use of water spray and other operational limits that would be required by MAQP #4696-00. Also, the facility would be operating on a temporary basis and pollutants would disperse from the ventilation of emissions at this site (see Section 7.F of this EA). Therefore, only minor impacts would be expected on human health from the proposed project.

F. Access to and Quality of Recreational and Wilderness Activities

Based on information received from JME, no recreational activities or wilderness areas are near the proposed project site. Therefore, no impacts to the access to and quality of recreational and wilderness activities are anticipated.

G. Quantity and Distribution of Employment

The concrete batch plant would only require a limited number of employees to operate and would have seasonal and intermittent operations. No individuals would be expected to permanently relocate to this area of operation as a result of operating the concrete batch plant. Therefore, no effects upon the quantity and distribution of employment in this area would be expected.

H. Distribution of Population

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

I. Demands of Government Services

Minor increases may be seen in traffic on existing roadways in the area while the concrete batch plant is being operated. In addition, government services would be required for acquiring the appropriate permits for the proposed project and to verify compliance with the permits that would be issued. However, demands for government services would expect to be minor.

J. Industrial and Commercial Activity

The operation of the plant 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. No additional industrial or commercial activity would be expected as a result of the proposed operation.

K. Locally Adopted Environmental Plans and Goals

JME would be allowed, by MAQP #4696-00, to operate in areas designated by Environmental Protection Agency as attainment or unclassified for ambient air quality. MAQP #4696-00 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. Because the proposed concrete batch plant would be a portable source and would likely 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 plant would cause only minor cumulative and secondary impacts to the social and economic aspects of the human environment in the immediate area of operation 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. Because the source is relatively small and temporary, only minor economic impacts to the local economy would be expected from operating the facility. Further, this facility may be operated in conjunction with other equipment owned and operated by JME, 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 the local economy.

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

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permitting action is for the operation of a portable truck-mix concrete batch plant, MAQP #4696-00 provides conditions and limitations to ensure the facility would 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 Resources Management Bureau, Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

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