



Montana Department of  
**ENVIRONMENTAL QUALITY**

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September 16, 2011

Jeremiah Johnson  
Johnson Redi-Mix LLC  
P.O. Box 645  
Chester MT, 59522

Dear Mr. Johnson,

Montana Air Quality Permit #4677-00 is deemed final as of September 16, 2011, by the Department of Environmental Quality (Department). This permit is for a Wash Plant and Concrete Batch Plant. 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

Craig Henrikson, P.E.  
Environmental Engineer  
Air Resources Management Bureau  
(406) 444-6711

VW:CH  
Enclosures

Montana Department of Environmental Quality  
Permitting and Compliance Division

Montana Air Quality Permit #4677-00

Johnson Redi-Mix LLC  
P.O. Box 645  
Chester, MT 59522

September 16, 2011



## MONTANA AIR QUALITY PERMIT

Issued To: Johnson Redi-Mix LLC.  
P.O. Box 645  
Chester, MT 59522

Permit #4677-00  
Application Complete: 7/25/2011  
Preliminary Decision: 8/11/2011  
Department Decision: 8/31/2011  
Permit Final: 9/16/2011  
AFS #777-4677

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Johnson Redi-Mix LLC. (Johnson), 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

Johnson is proposing to operate a portable wash plant and a portable concrete batch “truck mix” plant and associated equipment. For the purpose of this permit, any time the word “facility” is used it applies to both the wash plant and concrete batch plant.

#### B. Plant Locations

The wash plant and concrete plant are located at different sites as described below. The wash plant is located southwest of Chester the SE<sup>1</sup>/<sub>4</sub> of the SW<sup>1</sup>/<sub>4</sub> of Section 18, Township 29 North, Range 6 East, Liberty County, Montana. The wash plant site has raw material stockpiled and no additional raw materials will be mined in the near future. The only unit operation at the wash plant site is to load materials into the washer and load trucks for transfer to the batch concrete site of the aggregate and sand products from the washer.

The batch concrete plant is located just northeast of Chester, in the SE<sup>1</sup>/<sub>4</sub> of the NE<sup>1</sup>/<sub>4</sub> of Section 21, Township 32 North, Range 6 East, Liberty County, Montana.

MAQP #4677-00 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<sub>10</sub>) 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<sub>10</sub> nonattainment areas. A complete list of permitted equipment is contained in Section I.A. of the Permit Analysis to MAQP #4677-00.

### Section II: Conditions and Limitations

#### A. Emission Limitations

1. Johnson shall not cause or authorize to be discharged into the atmosphere from the wash plant or batch concrete plant any emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).

2. Johnson 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).
3. Johnson 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).
4. Johnson 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 and ARM 17.8.749).
5. Water and spray bars shall be available at the facility and used, as necessary, to maintain compliance with the opacity limitations in Sections II.A.1, II.A.2, and III.A.3 (ARM 17.8.749).
6. Johnson shall not operate more than one (1) diesel engine/generator at each location. The maximum design capacity of the engine that drives the generator shall not exceed 225 horsepower (hp) (ARM 17.8.749).
7. Johnson shall limit operation of each diesel engine to 5590 hours for any rolling 12-month-period (ARM 17.8.749). This maximum allowable hour limit prevents exceeding a 40-ton NO<sub>x</sub> threshold above which would require air modeling.
8. If the permitted equipment is used in conjunction with any other equipment owned or operated by Johnson, at either location, 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).
9. Johnson shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart III, *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 III; 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 either the wash plant or 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. Johnson 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 Johnson 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. Johnson 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. Johnson 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 – Johnson 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 Johnson fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Johnson 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. For this permit, a copy shall be maintained at both the wash plant and the concrete batch plant.
- G. Air Quality Operation Fees – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by Johnson 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. Johnson 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  
Johnson Redi-Mix LLC.  
MAQP #4677-00

I. Introduction/Process Description

A. Permitted Equipment

Johnson Redi-Mix LLC. (Johnson) owns and operates a portable wash plant with a maximum production capacity of 25 cubic yards per hour (yd<sup>3</sup>/hr) at one site and a “truck mix” batch concrete plant with a maximum capacity of 75 yd<sup>3</sup>/hr at a second site.

Wash Plant

Equipment located at the wash plant includes, but is not limited to the following:

- Feed hopper with associated screened conveyor and wash bars
- Washed rock discharge conveyor
- Fines and sand hopper with associated sand conveyor
- Caterpillar diesel-fired engine/generator 3306 225 horsepower (hp)
- Material is loaded using a 2002 John Deere 644H 4 yd<sup>3</sup> loader

Batch Concrete Plant

Equipment located at the plant includes, but is not limited to the following:

- Portable truck-mix concrete plant with a maximum production capacity of 75 yd<sup>3</sup>/hr
- Cement Storage Silo with baghouse of approximate dimensions 3 feet wide, 3 feet long, and 8 ½ feet tall containing 20 hanging bags
- Caterpillar diesel-fired engine/generator 3306 225 horsepower (hp)
- Associated equipment and operations (feed hoppers, conveyors, storage bins)
- Material is loaded using a Kobelco 3 yd<sup>3</sup> loader

B. Source Description

Johnson will utilize this wash plant and 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 particulate matter captured by the baghouse. 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 at the wash plant site utilizes water from the settling ponds while water at the concrete batch plant site is provided via a 2-inch line from the Chester City water main.

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.

## 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).

Johnson 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
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 Standards for Ozone
6. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
7. ARM 17.8.221 Ambient Air Quality Standard for Visibility
8. ARM 17.8.223 Ambient Air Quality Standard for PM<sub>10</sub>



Johnson 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, Johnson 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 Johnson 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 truck-mix 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 Johnson 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 III – 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.

The permitted 225 hp diesel-fired engines are CI ICE manufactured before April 1, 2006, and is not a fire pump engine; therefore this engine is not subject to NSPS. Since this permit is written in a de minimis friendly manner, this regulation may apply to engines in the future.

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 Emissions 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.

The permitted 225 hp diesel-fired engines are a CI RICE manufactured before June 12, 2006; therefore this engine is not subject to this subpart. Since this permit is written in a de minimis-friendly manner, area source provisions of the MACT may apply to future engines.

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. Johnson submitted the appropriate permit application and associated fee.
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. Johnson has a PTE greater than 15 TPY of particulate matter (PM) and for nitrogen oxides (NO<sub>x</sub>). Therefore, an air quality permit is required.
3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.
4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that 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. 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. Johnson submitted an affidavit of publication for the current permit action specific to the batch plant location. Johnson submitted an affidavit of publication of public notice for the June 29<sup>th</sup>, 2011, issue of the *Liberty County Times*, a newspaper of general circulation in the Town of Chester in Liberty County, as proof of public notice 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 Johnson 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 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<sub>10</sub>) in a serious PM<sub>10</sub> nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (1) Title V of the FCAA Amendments of 1990 requires that all sources, as defined in ARM 17.8.1204 (1), obtain a Title V Operating Permit. In reviewing and issuing MAQP #4677-00 for Johnson, 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<sub>10</sub> nonattainment area.
  - d. This facility is not subject to any current NSPS but may become subject to 40 CFR 60, Subpart IIII depending on the length of time the permitted equipment remains at the same location. The equipment is not subject to NSPS.
  - e. This facility not subject to any current NESHAP standards but may become subject to area source provisions of 40 CFR 63, Subpart ZZZZ as long as the permitted equipment is considered to be mobile.
  - 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 Johnson 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, Johnson will be required to obtain a Title V Operating Permit.

### III. BACT Determination

A BACT determination is required for each new or modified source. Johnson 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. All visible emissions from the wash plant and concrete batch plant are limited to 20% opacity. In addition, all visible emissions from any other associated equipment are limited to 20% opacity. Also, Johnson must take reasonable precautions to limit the fugitive emissions of airborne particulate matter on haul

roads, access roads, parking areas, and general plant property. Johnson shall use water spray bars and/or chemical dust suppressant, as necessary to maintain compliance with the opacity and reasonable precaution limitations.

Based on the relatively low amount of particulate, PM<sub>10</sub>, NO<sub>x</sub>, Carbon Monoxide (CO), Volatile Organic Compounds (VOC) and Sulfur Oxides (SO<sub>x</sub>) emitted it is economically infeasible to require pollution controls on the diesel generator. The control options selected have controls and control costs similar to other recently permitted similar sources and are capable of achieving the appropriate emission standards.

#### IV. Emission Inventory

The emission inventory reflects values at the 5590 hours of operation per the rolling 12-month period limit for diesel generators and 8760 for all other equipment.

Emission Source (Gray is Wash Site, Rest are Batch Site)	Emissions Tons/Year [PTE]						
	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	CO	NO <sub>x</sub>	SO <sub>x</sub>	VOC
Aggregate Loading into Hopper for Washing at Wash Site (Step AW- 1) (to elevated)	0.70	0.34					
Aggregate Washing at Wash Site and into Stock Piles (Step AW- 2) (to ground storage)	0.70	0.34					
Aggregate Delivery at Batch Site (Step A- 1) (ground storage)	2.10	1.02					
Aggregate Distribution to Mini- Stockpiles at Batch Site (Step A-2) (to ground storage)	2.10	1.02					
Aggregate Distribution to Elevated Feed Hopper (Step A-3) (to elevated storage)	2.10	1.02					
Aggregate Transfer to Elevated Weigh Hopper (Step A-4) (to elevated storage)	2.10	1.02					
Sand Loading into Hopper at Wash Site Storage (SW-1) ( sand to elevated storage)	0.16	0.08					
Sand washing at Wash site and into Stock piles (SW-2) (sand to ground storage)	0.16	0.08					
Sand Delivery to Ground Storage (Step S-1) (to ground storage)	0.49	0.23					
Sand Distribution to Mini-Piles (Step S-2) (to ground storage)	0.49	0.23					
Sand Transfer to Feed Hopper (Step S-3) (to elevated storage)	0.49	0.23					
Sand Transfer to Weigh Hopper (Step S-4) (to elevated storage)	0.49	0.23					
Cement Delivery to Silo (Step C-1)	0.07	0.03					
Cement Supplement (Fly Ash) Delivery to Silo (Step C-2) (none added)	0.00	0.00					
Weigh Hopper Loading (Step W-1)	2.60	1.25					
Truck Mix Loading (Step TM-2)	9.07	2.43					
Diesel Generator D-1 at Wash Site	1.38	1.38	1.38	4.20	19.50	1.29	1.58
Diesel Generator D-1 at Batch Site	1.38	1.38	1.38	4.20	19.50	1.29	1.58
Unpaved Roadways (Haul Roads)	10.78	2.97	0.30				
<b>TOTAL EMISSIONS &gt;</b>	<b>37.39</b>	<b>15.28</b>	<b>3.06</b>	<b>8.40</b>	<b>38.99</b>	<b>2.58</b>	<b>3.16</b>

#### Johnson Red-Mix LLC

Batch Plant Rate: 75 cubic yards/hour (Maximum)  
150.9 tons/hour (Maximum)

Supplemental Power Plant: 225 Diesel CAT mid 1980's

This spreadsheet is based on AP 42 Table 11.12-5. Dated 6/06  
All values are based on finished product throughput not individual raw materials.

#### Material Handling - Aggregate

Process Rate: 75.0 cu. yards/hour

Note: Wash Site Per Permittee only capable of 25 cu. Yards/hr

Operating Hours 8760 hours/year

**Aggregate Loading into Hopper for Washing at Wash Site (Step AW- 1) (to elevated)**

PM Emissions:

Emission Factor	0.0064	lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0064 lbs/cu. yard) * (25.00 cu. yard/hour) =			0.16	lbs/hr
	(0.16 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =			0.70	TPY

PM<sub>10</sub> Emissions:

Emission Factor	0.0031	lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0031 lbs/cu. yard) * (25.00 cu. yard/hour) =			0.08	lbs/hr
	(0.08 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =			0.34	TPY

**Aggregate Washing at Wash Site and into Stock Piles (Step AW- 2) (to ground storage)**

PM Emissions:

Emission Factor	0.0064	lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0064 lbs/cu. yard) * (25.00 cu. yard/hour) =			0.16	lbs/hr
	(0.16 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =			0.70	TPY

PM<sub>10</sub> Emissions:

Emission Factor	0.0031	lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0031 lbs/cu. yard) * (25.00 cu. yard/hour) =			0.08	lbs/hr
	(0.08 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =			0.34	TPY

**Aggregate Delivery at Batch Site (Step A- 1) (ground storage)**

PM Emissions:

Emission Factor	0.0064	lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0064 lbs/cu. yard) * (75.00 cu. yard/hour) =			0.48	lbs/hr
	(0.48 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =			2.10	TPY

PM<sub>10</sub> Emissions:

Emission Factor	0.0031	lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0031 lbs/cu. yard) * (75.00 cu. yard/hour) =			0.23	lbs/hr
	(0.23 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =			1.02	TPY

**Aggregate Distribution to Mini- Stockpiles at Batch Site (Step A-2) (to ground storage)**

PM Emissions:

Emission Factor	0.0064	lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0064 lbs/cu. yard) * (75.00 cu. yard/hour) =			0.48	lbs/hr
	(0.48 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =			2.10	TPY

PM<sub>10</sub> Emissions:

Emission Factor	0.0031	lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0031 lbs/cu. yard) * (75.00 cu. yard/hour) =			0.23	lbs/hr
	(0.23 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =			1.02	TPY

**Aggregate Distribution to Elevated Feed Hopper (Step A-3) (to elevated storage)**

PM Emissions:

Emission Factor	0.0064	lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0064 lbs/cu. yard) * (75.00 cu. yard/hour) =			0.48	lbs/hr
	(0.48 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =			2.10	TPY

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

Emission Factor	0.0031 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0031 lbs/cu. yard) * (75.00 cu. yard/hour) =		0.23	lbs/hr
	(0.23 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		1.02	TPY

**Aggregate Transfer to Elevated Weigh Hopper (Step A-4) (to elevated storage)**

PM Emissions:

Emission Factor	0.0064 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0064 lbs/cu. yard) * (75.00 cu. yard/hour) =		0.48	lbs/hr
	(0.48 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		2.10	TPY

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

Emission Factor	0.0031 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0031 lbs/cu. yard) * (75.00 cu. yard/hour) =		0.23	lbs/hr
	(0.23 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		1.02	TPY

**Material Handling - Sand**

Process Rate:	75.0 cu. yards/hour
Operating Hours	8760 hours/year

**Sand Loading into Hopper at Wash Site Storage (SW-1) ( sand to elevated storage)**

PM Emissions:

Emission Factor	0.0015 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0015 lbs/cu. yard) * (25.00 cu. yard/hour) =		0.04	lbs/hr
	(0.04 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		0.16	TPY

PM<sub>10</sub> Emissions:

Emission Factor	0.0007 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0007 lbs/cu. yard) * (25.00 cu. yard/hour) =		0.02	lbs/hr
	(0.02 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		0.08	TPY

**Sand washing at Wash site and into Stock piles (SW-2) (sand to ground storage)**

PM Emissions:

Emission Factor	0.0015 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0015 lbs/cu. yard) * (25.00 cu. yard/hour) =		0.04	lbs/hr
	(0.04 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		0.16	TPY

PM<sub>10</sub> Emissions:

Emission Factor	0.0007 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0007 lbs/cu. yard) * (25.00 cu. yard/hour) =		0.02	lbs/hr
	(0.02 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		0.08	TPY

**Sand Delivery to Ground Storage (Step S-1) (to ground storage)**

PM Emissions:

Emission Factor	0.0015 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0015 lbs/cu. yard) * (75.00 cu. yard/hour) =		0.11	lbs/hr
	(0.11 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		0.49	TPY



PM<sub>10</sub> Emissions:

Emission Factor	0.0007 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0007 lbs/cu. yard) * (75.00 cu. yard/hour) =		0.05	lbs/hr
	(0.05 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		0.23	TPY

#### Sand Distribution to Mini-Piles (Step S-2) (to ground storage)

PM Emissions:

Emission Factor	0.0015 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0015 lbs/cu. yard) * (75.00 cu. yard/hour) =		0.11	lbs/hr
	(0.11 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		0.49	TPY

PM<sub>10</sub> Emissions:

Emission Factor	0.0007 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0007 lbs/cu. yard) * (75.00 cu. yard/hour) =		0.05	lbs/hr
	(0.05 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		0.23	TPY

#### Sand Transfer to Feed Hopper (Step S-3) (to elevated storage)

PM Emissions:

Emission Factor	0.0015 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0015 lbs/cu. yard) * (75.00 cu. yard/hour) =		0.11	lbs/hr
	(0.11 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		0.49	TPY

PM<sub>10</sub> Emissions:

Emission Factor	0.0007 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0007 lbs/cu. yard) * (75.00 cu. yard/hour) =		0.05	lbs/hr
	(0.05 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		0.23	TPY

#### Sand Transfer to Weigh Hopper (Step S-4) (to elevated storage)

PM Emissions:

Emission Factor	0.0015 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0015 lbs/cu. yard) * (75.00 cu. yard/hour) =		0.11	lbs/hr
	(0.11 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		0.49	TPY

PM<sub>10</sub> Emissions:

Emission Factor	0.0007 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0007 lbs/cu. yard) * (75.00 cu. yard/hour) =		0.05	lbs/hr
	(0.05 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		0.23	TPY

#### Material Handling - Cement & Cement Supplement

Process Rate:	75.0	cu. yards/hour
Operating Hours	8760	hours/year

Cement Delivery to Silo (Step C-1)

PM Emissions (controlled):

Emission Factor	0.0002 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0002 lbs/cu. yard) * (75.00 cu. yard/hour) =		0.02	lbs/hr
	(0.02 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		0.07	TPY

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

Emission Factor	0.0001 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0001 lbs/cu. yard) * (75.00 cu. yard/hour) =		0.01	lbs/hr
	(0.01 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		0.03	TPY

#### Cement Supplement (Fly Ash) Delivery to Silo (Step C-2) (none added)

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) * (75.00 cu. yard/hour) =		0.02	lbs/hr
	(0.02 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		0.10	TPY

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

Emission Factor	0.0002 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0002 lbs/cu. yard) * (75.00 cu. yard/hour) =		0.02	lbs/hr
	(0.02 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		0.07	TPY

#### Weigh Hopper Loading (Step W-1)

Process Rate: 75.0 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) * (75.00 cu. yard/hour) =		0.59	lbs/hr
	(0.59 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		2.60	TPY

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

Emission Factor	0.0038 lbs/cu. yard produced	[AP-42 Table 11.12-5, 6/06]		
Calculations	(0.0038 lbs/cu. yard) * (75.00 cu. yard/hour) =		0.29	lbs/hr
	(0.29 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		1.25	TPY

#### Truck Mix Loading (Step TM-2)

Process Rate: 75.0 cu. yards/hour  
150.90 tons/hour  
Operating Hours 8760 hours/year

PM Emissions: (controlled)

Emission Factor	0.098 Taken from Table 11.2-2 6/06 for controlled (must be multiplied below by 0.140)			
	0.0137 lbs/ton material loaded	[AP-42 Table 11.2-2, 6/06]		
Calculations	(0.01372 lbs/ton) * (150.90 tons/hour) =		2.07	lbs/hr
	(2.07 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		9.07	TPY

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

Emission Factor	0.0263 Taken from Table 11.2-2 6/06 for controlled (must be multiplied below by 0.140)			
	0.0037 lbs/ton material loaded	[AP-42 Table 11.2-2, 6/06]		
Calculations	(0.003682 lbs/ton) * (150.90 tons/hour) =		0.56	lbs/hr
	(0.56 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =		2.43	TPY

#### Diesel Generator D-1 at Wash Site

Engine Rating: 225 hp  
Operating Hours: 5590 hours/year

Particulate Emissions:

PM Emissions:

Emission Factor	0.0022 lb/hp-hr	[AP-42 3.3-1, 10/96 ]		
Calculations	(0.0022 lb/hp-hr) * (225 hp) =		0.50	lbs/hr
	(0.50 lbs/hr) * (5590 hrs/yr) * (0.0005 tons/lb) =		1.38	TPY

PM<sub>10</sub> Emissions:

Emission Factor	0.0022 lb/hp-hr	[AP-42 3.3-1, 6/06 ]		
Calculations	(0.0022 lb/hp-hr) * (225 hp) =		0.50	lbs/hr
	(0.50 lbs/hr) * (5590 hrs/yr) * (0.0005 tons/lb) =		1.38	TPY

PM<sub>2.5</sub> Emissions:

Emission Factor	0.0022 lb/hp-hr	[AP-42 3.3-1, 10/96 ]		
Calculations	(0.0022 lb/hp-hr) * (225 hp) =		0.50	lbs/hr
	(0.50 lbs/hr) * (5590 hrs/yr) * (0.0005 tons/lb) =		1.38	TPY

CO Emissions:

Emission Factor	0.00668 lb/hp-hr	[AP-42 3.3-1, 6/06 ]		
Calculations	(0.00668 lb/hp-hr) * (225 hp) =		1.50	lbs/hr
	(1.50 lbs/hr) * (5590 hrs/yr) * (0.0005 tons/lb) =		4.20	TPY

NO<sub>x</sub> Emissions:

Emission Factor	0.031 lb/hp-hr	[AP-42 3.3-1, 6/06 ]		
Calculations	(0.031 lb/hp-hr) * (225 hp) =		6.98	lbs/hr
	(6.98 lbs/hr) * (5590 hrs/yr) * (0.0005 tons/lb) =		19.50	TPY

SO<sub>x</sub> Emissions:

Emission Factor	0.00205 lb/hp-hr	[AP-42 3.3-1, 6/06 ]		
Calculations	(0.0021 lb/hp-hr) * (225 hp) =		0.46	lbs/hr
	(0.46 lbs/hr) * (5590 hrs/yr) * (0.0005 tons/lb) =		1.29	TPY

VOC Emissions:

Emission Factor	0.002511 lb/hp-hr	[AP-42 3.3-1, 6/06 ]		
Calculations	(0.0025 lb/hp-hr) * (225 hp) =		0.56	lbs/hr
	(0.56 lbs/hr) * (5590 hrs/yr) * (0.0005 tons/lb) =		1.58	TPY

**Diesel Generator D-1 at Batch Site**

Engine Rating: 225 hp  
Operating Hours: 5590 hours/year

**Particulate Emissions:**

PM Emissions:

Emission Factor	0.0022 lb/hp-hr	[AP-42 3.3-1, 10/96 ]		
Calculations	(0.0022 lb/hp-hr) * (225 hp) =		0.50	lbs/hr
	(0.50 lbs/hr) * (5590 hrs/yr) * (0.0005 tons/lb) =		1.38	TPY

PM<sub>10</sub> Emissions:

Emission Factor	0.0022 lb/hp-hr	[AP-42 3.3-1, 6/06 ]		
Calculations	(0.0022 lb/hp-hr) * (225 hp) =		0.50	lbs/hr
	(0.50 lbs/hr) * (5590 hrs/yr) * (0.0005 tons/lb) =		1.38	TPY

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

Emission Factor	0.0022 lb/hp-hr	[AP-42 3.3-1, 10/96]		
Calculations	(0.0022 lb/hp-hr) * (225 hp) =		0.50	lbs/hr
	(0.50 lbs/hr) * (5590 hrs/yr) * (0.0005 tons/lb) =		1.38	TPY

**CO Emissions:**

Emission Factor	0.00668 lb/hp-hr	[AP-42 3.3-1, 6/06]		
Calculations	(0.00668 lb/hp-hr) * (225 hp) =		1.50	lbs/hr
	(1.50 lbs/hr) * (5590 hrs/yr) * (0.0005 tons/lb) =		4.20	TPY

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

Emission Factor	0.031 lb/hp-hr	[AP-42 3.3-1, 6/06]		
Calculations	(0.031 lb/hp-hr) * (225 hp) =		6.98	lbs/hr
	(6.98 lbs/hr) * (5590 hrs/yr) * (0.0005 tons/lb) =		19.50	TPY

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

Emission Factor	0.0021 lb/hp-hr	[AP-42 3.3-1, 6/06]		
Calculations	(0.0021 lb/hp-hr) * (225 hp) =		0.46	lbs/hr
	(0.46 lbs/hr) * (5590 hrs/yr) * (0.0005 tons/lb) =		1.29	TPY

**VOC Emissions:**

Emission Factor	0.0025 lb/hp-hr	[AP-42 3.3-1, 6/06]		
Calculations	(0.0025 lb/hp-hr) * (225 hp) =		0.56	lbs/hr
	(0.56 lbs/hr) * (5590 hrs/yr) * (0.0005 tons/lb) =		1.58	TPY

**Unpaved Roadways (Haul Roads)**

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)			
[AP-42 Table 13.2.2-2, 11/06]	k, Empirical Constant PM =		4.9	
[AP-42 Table 13.2.2-2, 11/06]	k, Empirical Constant PM <sub>10</sub> =		1.5	
[AP-42 Table 13.2.2-2, 11/06]	k, Empirical Constant PM <sub>2.5</sub> =		0.15	
[AP-42 Table 13.2.2-1, 11/06]	s, Surface Material Silt Content (%) =		7.1	
[Johnson Redi-Mix provided]	W, Mean Vehicle Weight (tons) =		48	
[AP-42 Table 13.2.2-2, 11/06]	a, Empirical Constant PM =		0.7	
[AP-42 Table 13.2.2-2, 11/06]	a, Empirical Constant PM <sub>10</sub> and PM <sub>2.5</sub> =		0.9	
[AP-42 Table 13.2.2-2, 11/06]	b, Empirical Constant PM - PM <sub>2.5</sub> =		0.45	

**PM Emissions (uncontrolled): PM<sub>30</sub>**

Emission Factor	$EF = 4.9 * (7.1/12)^{0.7} * (48/3)^{0.45} =$	11.82	lbs/VMT	
Calculations	(11.82 lbs/VMT) * (5 miles/day) =			59.08 lbs/day
	(59.08 lbs/day) * (365 days/yr) * (0.0005 tons/lb) =			10.78 TPY

**PM<sub>10</sub> Emissions (uncontrolled):**

Emission Factor	$EF = 1.5 * (7.1/12)^{0.9} * (48/3)^{0.45} =$	3.26	lbs/VMT	
Calculations	(3.26 lbs/VMT) * (5 miles/day) =			16.28 lbs/day
	(16.28 lbs/day) * (365 days/yr) * (0.0005 tons/lb) =			2.97 TPY

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

Emission Factor	$EF = 0.15 * (7.1/12)^{0.9} * (48/3)^{0.45} =$	0.33	lbs/VMT	
Calculations	(0.33 lbs/VMT) * (5 miles/day) =			1.63 lbs/day
	(1.63 lbs/day) * (365 days/yr) * (0.0005 tons/lb) =			0.30 TPY

V. Existing Air Quality

MAQP #4677-00 is issued for the operation of a portable wash plant and truck mix concrete batch plant. The location of the wash plant will be at the NE¼ of the NW¼ of Section 19, Township 29 North, Range 6 East and the SE¼ of the SW¼ of Section 18, Township 29 North, Range 6 East, Liberty County, Montana.

This facility would be allowed to operate at this proposed site and any other areas designated as attainment or unclassified for all National Ambient Air Quality Standards (NAAQS); excluding counties that have a Department-approved permitting program, areas considered tribal lands, or areas in or within 10 kilometers (km) of certain PM<sub>10</sub> nonattainment areas. The permit contains operational conditions and limitations that would protect air quality for this site and the surrounding area. Also, 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 short-lived.

VI. Air Quality Impacts

This permit is for a portable wash plant and truck mix concrete batch plant. The amount of controlled particulate emissions generated by this project is not expected to generate concentrations of PM<sub>10</sub> in the ambient air that exceed any set standard. In addition, this source is portable and any air quality impacts will be short-lived.

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)].
		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.

DEPARTMENT OF ENVIRONMENTAL QUALITY  
Permitting and Compliance Division  
Air Resources Management Bureau  
1520 East Sixth Avenue  
P.O. Box 200901  
Helena, Montana 59620-0901  
(406) 444-3490

**FINAL ENVIRONMENTAL ASSESSMENT (EA)**

*Issued For:* Johnson Redi-Mix LLC  
P.O. Box 645  
Chester, MT 59522

*Permit Number:* #4677-00

*Preliminary Determination on Permit Issued:* 8/11/2011

*Department Decision Issued:* 8/31/11

*Permit Final:* 9/16/2011

1. *Legal Description of Site:* Johnson submitted an application to operate a portable wash plant and portable concrete batch plant. The location of the wash plant will be at the SE<sup>1</sup>/<sub>4</sub> of the SW<sup>1</sup>/<sub>4</sub> of Section 18, Township 29 North, Range 6 East, Liberty County Montana. The location of the concrete batch plant will be in the southwest corner of the SE<sup>1</sup>/<sub>4</sub> of the NE<sup>1</sup>/<sub>4</sub> of Section 21, Township 32 North, Range 6 East, Liberty County, Montana. In addition, Permit # 4677-00 would apply while operating at any location in the state of Montana, except within those areas having a Department approved permitting program. *A Missoula County air quality permit would be required for locations within Missoula County, Montana.*
2. *Description of Project:* The permit application is for the construction and operation of a portable wash plant and portable concrete batch plant. The wash plant has a maximum capacity of 25 yd<sup>3</sup>/hr and the concrete plant a maximum capacity of 75 yd<sup>3</sup>/hr. Each site also has a 225 hp diesel generator and associated equipment. The process description is discussed in the permit analysis Section I.B of Permit # 4677-00.
3. *Objectives of Project:* The permit would allow Johnson to utilize aggregate and cement for the production of concrete to sell to customers in construction.
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 preconstruction permit to the proposed facility. However, the Department does not consider the "no-action" alternative to be appropriate because Johnson 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 Permit # 4677-00.
6. *Regulatory Effects on Private Property Rights:* The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined the permit conditions would be reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and 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 Resource			x			yes
H.	Demands on Environmental Resource of Water, Air, and Energy			x			yes
I.	Historical and Archaeological Sites				x		yes
J.	Cumulative and Secondary Impacts			x			yes

**Summary of Comments on Potential Physical and Biological Effects:** The following comments have been prepared by the Department.

A. Terrestrial and Aquatic Life and Habitats

Terrestrials would use the same areas that the concrete batch plant operations occupy. However, the concrete batch plant operations alone would present only minor impacts upon terrestrial life in the area because of the temporary nature of the operation. It is not expected that aquatic life would be significantly affected. The batch concrete site location is east of the Great Northern Reservoir. The wash plant location is at a surface gravel mine operation so significant impacts are not expected.

B. Water Quality, Quantity, and Distribution

Although there would be an increase in air emissions in the area where the concrete batch plant facility would operate, there would be minor impacts on water quality, quantity, and distribution because of the temporary nature, size, operational requirements, and conditions placed in Permit # 4677-00 for the facility. Further, as described in Section 7.F of this EA, the Department determined that any impacts from deposition of pollutants would be minor. In addition, any accidental spills or leaks from equipment would be required to be handled according to the appropriate environmental regulations in an effort to minimize any potential adverse impact on the immediate and surrounding area. Water would be used for dust suppression, but would only cause a minor disturbance to the area.

C. Geology and Soil Quality, Stability, and Moisture

As a result of the portable concrete batch plant operation, there would be minor impacts to the geology and soil quality, stability, and moisture near the equipment’s operational area because of the increased vehicle traffic and deposition of pollutants the facility. As explained in Section 7.F of this EA, the facility’s size, operational requirements, temporary nature of the operation, and conditions placed in Permit #4677-00 would minimize the impacts from deposition. In addition, the facility would be relatively small in size. Disturbance for the siting of the equipment would be new but the physical disturbance size would be limited to the equipment specified within Permit #4677-00 and thereby limiting the potential impact to the local geology and soil quality, stability, and moisture.



D. Vegetation Cover, Quantity, and Quality

Because small amounts of vegetation would be disturbed during the setup of the portable concrete batch plant operations, and small amounts of pollutant deposition would occur on the surrounding vegetation, there would be minor impacts on the local vegetative cover, quantity, and quality. As explained in Section 7.F of this EA, the Department determined that as a result of the size and nature of the operation and conditions placed in Permit #4677-00, any impacts on vegetative cover, quantity, and quality from the deposition of pollutants would be minor.

E. Aesthetics

The concrete batch plant operations would be visible to some of the closest neighbors and would create additional noise in the area. However, Permit #4677-00 would include conditions to control emissions, including visible emissions, from the plant. The facility would be relatively small and likely in operation to support projects in close proximity to the facility. Therefore, any aesthetic and noise impacts would be minor.

F. Air Quality

The air quality emission impacts from the concrete batch plant operations would be minor because Permit #4677-00 would include conditions limiting the visible emissions (opacity) from the plant and reducing the hours of operation to reduce the emissions of air pollution. In addition, the facility would be required to utilize water spray bars and other means to control air pollution. The operations would be limited by Permit #4677-00 to total particulate emissions of 250 tons/year or less from non-fugitive sources at the plant, in addition to any additional equipment at the site. Because of the size and temporary nature of the operation and conditions placed in Permit #4677-00, impacts from the deposition of pollutants would be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The proposed project would have a minor impact on any unique endangered, fragile, or limited environmental resources. The Department, in an effort to identify any species of special concern associated with the proposed site location, contacted the Montana Natural Heritage Program (MNHP). Search results have concluded there are six species of concern in the area. Area, in this case, is defined by the township, range and section of the proposed site, with an additional one-mile buffer. The species of concern identified in the search include the following vertebrate animals:

1. Loggerhead Shrike (sensitive)
2. Brewer's Sparrow (sensitive)
3. Long-billed Curlew (sensitive)
4. Baird's Sparrow (sensitive)
5. McCown's Longspur (sensitive)
6. Chestnut collared Longspur (sensitive)

Some new minor, if any impacts are likely within the immediate footprint of the batch concrete plant as the land most recently was in the CRP program.

The wash plant site was also checked relative to unique endangered, fragile or limited environmental resources. This location also listed the Long-billed Curlew, Chestnut collard Longspur, and Loggerhead Shrike. In addition, the wash plant location also listed the following vertebrate animals:

1. Black-tailed Prairie Dog (sensitive)
2. Blue Sucker (sensitive)
3. Sauger (sensitive)
4. Great Blue Heron

At the wash plant, no impacts are expected given it currently is a developed gravel operation.

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

The operation of the concrete batch plant facility would only require small quantities of water, air, and energy for proper operation, due to the relatively small size of the facility. Small amounts of water would be used for dust control on the surrounding roadways and job site as well as the for the concrete batch plant operation. As described in Section 7.F of this EA, pollutant emissions generated from the facility would have minimal impacts on air quality in the immediate and surrounding area. Energy would be generated from the portable generator, so no other sources of power would be necessary to operate the facility. A future process change may be the extension of permanent power to the site, which would make the generator only used for back-up power and would mitigate local impacts. The generator would consume energy in the form of diesel fuel, a non-renewable resource. Overall, the equipment is relatively small and would have operational restrictions placed in Permit #4677-00. Because the facility operations would be seasonal and temporary, demands and impacts to the environmental resource of water, air and energy would be minor.

I. Historical and Archaeological Sites

The concrete batch plant operations would locate in an area formerly within CRP property. According to the Montana State Historic Preservation Office, there is low likelihood of adverse disturbance to any known archaeological or historic site, given previous industrial disturbance within the area. Therefore, the operation would not have an effect on any known historic or archaeological site. Similarly, because the wash plant location is within an existing surface mine area for gravel, no resources would be expected to be impacted at this location.

J. Cumulative and Secondary Impacts

The concrete batch plant operations would cause minor cumulative and secondary impacts to the physical and biological environment in the immediate area because the plant would generate emissions of particulate matter and PM-10. The Department expects this facility to operate in compliance with all applicable rules and regulations as would be outlined in Permit #4677-00.

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 Department has prepared the following comments.

A. Social Structures and Mores

The operation of the concrete batch plant facility would not alter or disrupt any local lifestyles or communities (social structures or mores) in the area of operation because the facility would be relatively small and would operate intermittently. Therefore, the existing social structures and mores would not be affected as a result of this permitting action.

B. Cultural Uniqueness and Diversity

The concrete batch plant operations would have no impact on the cultural uniqueness and diversity of the area because the source would be small and temporary and would be operating in a permitted open cut pit. Furthermore, the area surrounding the proposed site would remain predominantly unchanged because Johnson would operate a small and temporary facility.

C. Local and State Tax Base and Tax Revenue

The concrete batch plant operations would have little, if any, effect on the local and state tax base and tax revenue because the facility would be a seasonal source; therefore, it would not remain at any individual site for an extended period of time. Johnson would expect to employ 4 employees on a seasonal or temporary basis.

D. Agricultural or Industrial Production

The concrete batch plant operations proposed project would locate in a parcel previously part of CRP. Minor and temporary affects could occur to the former CRP land, but IEMB would be responsible for oversight of any reclamation activities. Topsoil has been scraped and saved from the disturbed acreage with rehabilitation possible when and if the batch concrete plant ceases operation. Further, the concrete batch plant operations would be small by industrial standards and, thus, would have only a minor impact on local industrial production.

E. Human Health

Permit #4677-00 would incorporate conditions to ensure that the concrete batch plant operations would be operated in compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health. Since these conditions would be incorporated, only minor impacts would be expected from this concrete batch plant facility.

F. Access to and Quality of Recreational and Wilderness Activities

The concrete batch plant operations would not affect any access to recreational and wilderness activities because of the lack of wilderness areas in the proximity. However, minor effects on the quality of recreational activities would be created by noise from the site as some recreational may occur on the water body known as the Great Northern Reservoir located west of the batch concrete site. It is not known whether legal public access is available to the Great Northern Reservoir or whether it is private property with no access.

G. Quantity and Distribution of Employment

The concrete batch plant operations would have a minor effect on the quantity and distribution of employment in the area because Johnson would only use 4 employees for the project. These employees would be employed by Johnson on a seasonal or temporary basis and would not likely permanently locate to the area.

H. Distribution of Population

The concrete batch plant operations would not disrupt the normal population distribution in the area because of the remote location of the site and the size of the operations.

I. Demands of Government Services

Minor increases would be seen on traffic on existing roadways in the area while the concrete batch plant operations are in progress. 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 concrete batch plant operations would represent only a minor increase in the industrial activity in the given area because small size of the operations and the portable and seasonal nature of the facility. Traffic between the wash plant site and batch concrete site would see some additional increase in industrial traffic. No other known additional industrial or commercial activity would be expected as a result of the proposed operation.

K. Locally Adopted Environmental Plans and Goals

The Department is not aware of any locally adopted environmental plans or goals that would be affected by the proposed project. The state and national ambient air quality standards would protect the proposed site and the environment surrounding the site.

L. Cumulative and Secondary Impacts

The concrete batch plant operations would cause minor cumulative and secondary impacts to the social and economic environment in the immediate area because the facility is a portable, temporary source. Small increases in traffic would have minor effects on local traffic in the immediate area. Because the source is a relatively small, temporary source, only minor economic impacts to the local economy could be expected from the operation of the facility. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as would be outlined in Permit #4677-00.

*Recommendation:* An EIS is not required.

*If an EIS is not required, explain why the EA is an appropriate level of analysis:* All potential effects resulting from construction and operation of the proposed facility are minor, therefore, an EIS is not required. In addition, the source would be applying the Best Available Control Technology and the analysis indicates compliance with all applicable air quality rules and regulations.

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

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

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