



Montana Department of
ENVIRONMENTAL QUALITY

Brian Schweitzer, Governor

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February 2, 2009

Knife River Corporation
21730 Frontage Road
P.O. Box 9
Belgrade, MT 59714

Dear Ms. Flikkema:

Air Quality Permit #2659-05 is deemed final as of January 29, 2009, by the Department of Environmental Quality (Department). This permit is for a Knife River portable crushing and screening facility. 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) 444-3490

John Raudsep
Air Quality Specialist
Air Resources Management Bureau
(406) 444-0283

VW:JAR
Enclosure

AIR QUALITY PERMIT

Issued To: Knife River Corporation
P.O. Box 9
21730 Frontage Road
Belgrade, MT 59714

Permit #2659-05
Administrative Amendment (AA)
Request Received: 01/24/2008
Department's Decision on AA: 01/14/2009
Permit Final: 01/31/09
AFS #777-2659

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

Section I: Permitted Facilities

A. Plant Location

Knife River operates a portable crushing and screening facility at various locations throughout Montana. MAQP #2659-05 applies while operating at any location within the state of Montana, except within 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) non-attainment area. A complete list of the permitted equipment can be found in Section I.A of the Permit Analysis.

Addendum #2 applies to the Knife River facility while operating at any location in or within 10 km of certain PM₁₀ nonattainment areas during the summer months (April 1 – September 30) and at sites approved by the Department during the winter months (October 1 – March 31).

B. Current Permit Action:

On January 24, 2008, the Department received a request from Knife River to change the name on MAQP #2659-04 from JTL Group, Inc. to Knife River. The current permit action will transfer ownership of MAQP #2659-05 from JTL Group, Inc. to Knife River. In addition, Knife River requested that the permit be written in a de minimis-friendly manner and that the permit be updated to reflect the correct horsepower (hp) rating of the diesel generator. The current permit action changes the existing engine rating of 400 kilowatts (kW) to an engine not to exceed 625 hp. The emission inventory was updated to reflect these changes. The current permit action also updates the permit to reflect current permit language and rule references used by the Department and changes the permit to a de minimis-friendly format.

Section II: Limitations and Conditions

A. Emission Limitations

1. All visible emissions from any Standards of Performance for New Stationary Source (NSPS)-affected crushers may not exhibit an opacity of 15% or greater averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO).

2. All visible emissions from any other NSPS-affected equipment, such as screens or conveyor transfers, shall not exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO).
3. All visible emissions from any non-NSPS affected equipment shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.308 and ARM 17.8.752).
4. 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 17.8.752).
5. Knife River shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).
6. Knife River 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.4 (ARM 17.8.749).
7. Knife River shall not operate more than one crusher at any given time and the maximum rated design capacity of the crusher shall not exceed 300 tons per hour (TPH) (ARM 17.8.749).
8. Crushing production from the facility is limited to 2,628,000 tons during any rolling 12-month time period (ARM 17.8.749).
9. Knife River shall not operate more than two screens at any given time and the maximum combined rated design capacity of the two screens shall not exceed 380 TPH (ARM 17.8.749).
10. Screening production from the facility is limited to 3,328,800 tons during any rolling 12-month time period (ARM 17.8.749).
11. Knife River shall operate no more than one diesel generator and the maximum rated engine design capacity shall be 625 hp or less (ARM 17.8.749).
12. If the permitted equipment is used in conjunction with any other equipment owned or operated by Knife River, 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).
13. Knife River shall comply with all applicable standards and limitations, and the reporting, recordkeeping, testing, and notification requirements contained in 40 CFR 60, Subpart OOO, *Standards of Performance for Nonmetallic Mineral Processing Plants* (ARM 17.8.340 and 40 CFR 60, Subpart OOO).
14. Knife River shall comply with all applicable standards and limitations, and the reporting, recordkeeping, testing, 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*

B. Testing Requirements

1. Within 60 days after achieving the maximum production rate, but no later than 180 days after initial startup, an Environmental Protection Agency (EPA) Method 9 opacity test and/or other methods and procedures, as specified in 40 CFR 60.675, must be performed on any NSPS affected equipment to demonstrate compliance with the emissions limitations contained in Sections II.A.1 and II.A.2 (ARM 17.8.340 and 40 CFR 60, Subpart A and Subpart OOO).
2. All compliance source tests shall be conducted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
3. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. If this crushing and screening facility 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 where the transfer is to be made, at least 15 days prior to the move. The Intent to Transfer Form and the proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.765).
2. Knife River 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 Knife River as a permanent business record for at least 5 years following the date of the measurement, shall be submitted to the Department upon request, and shall be available at the plant site for inspection by the Department (ARM 17.8.749).
3. Knife River shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the most recent emission inventory report and sources identified in Section I.A of the permit analysis.

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

4. Knife River shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745 that would include a 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 or ***the addition of a new emissions unit***. The notice must be submitted to the Department, in writing, 10

days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).

5. Knife River shall document, by month, the crushing production from the facility. By the 25th day of each month, Knife River shall calculate the crushing production from the facility for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.8. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
6. Knife River shall document, by month, the screening production from the facility. By the 25th day of each month, Knife River shall calculate the screening production from the facility for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.10. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

Section III: General Requirement

Knife River shall comply with all conditions and limitations in Addendum #2 of MAQP #2659-05, as appropriate (ARM 17.8.749).

Section IV: General Conditions

- A. Inspection – Knife River shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections, surveys, collecting samples, obtaining data, auditing any monitoring equipment 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 Knife River fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations - Nothing in this permit shall be construed as relieving Knife River 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.* (ARM 17.8.756).
- D. Enforcement - Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals - Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the

- application is final 16 days after the Department's decision is made.
- F. Permit Inspection - As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by Department personnel at the location of the permitted source.
 - G. Construction Commencement - Construction must begin within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked (ARM 17.8.762).
 - H. Permit Fees - Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by Knife River may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
 - 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. Knife River shall comply with the conditions contained in this permit while operating at any location in Montana, except within those areas that have a Department-approved permitting program or areas considered tribal lands.

Permit Analysis
Knife River Corporation
Permit #2659-05

I. Introduction/Process Description

A. Permitted Equipment

Knife River Corporation (Knife River) owns and operates a portable crushing and screening facility consisting of the following equipment:

- Crusher (up to 300 tons/hour (TPH))
- Two screens (combined capacity up to 380 TPH)
- Diesel generator (engine up to 625 horsepower (hp))
- Other associated equipment

Source Description

Knife River proposes to use this crushing and screening plant and associated equipment to crush and sort sand and gravel that will be used in various construction operations. For a typical operation, raw materials are screened and/or crushed. Material is separated by size and stockpiled for sale or use.

C. Permit History

On August 31, 1990, Figgins Sand and Gravel, Inc. (Figgins) was issued Permit #**2659-00** to operate a portable crushing and screening plant containing a 1952 Pioneer jaw crusher, a 1950 Pioneer roll crusher, and associated equipment. The plant was initially located in the SE¹/₄ of Section 5, Township 7 South, Range 4 East, in Gallatin County, MT.

On June 26, 1999, Figgins was issued Permit #**2659-01**. This permit action added a 1964 El Jay cone crusher to the permit according to the provisions of the Administrative Rules of Montana (ARM) 17.8.705(1)(r). Permit #2659-01 replaced Permit #2659-00.

On April 23, 2002, Figgins was issued Permit #**2659-02** to replace the 1964 El Jay cone crusher listed in Permit #2659-01 with a 1981 El Jay cone crusher (200 TPH). In addition, Figgins requested to replace the 1952 Pioneer jaw crusher listed in Permit #2659-01 with a 1997 Armadillo jaw crusher (300 TPH). The Department of Environmental Quality (Department) removed the 1964 El Jay cone crusher and the 1952 Pioneer jaw crusher from the permit. Further, the Department added the 1981 El Jay cone crusher and the 1997 Armadillo jaw crusher to the permit according to the provisions of ARM 17.8.705(1)(r). Permit #2659-02 replaced Permit #2659-01.

On February 10, 2003, the Department received a request to transfer Permit #2659-02 from Figgins to JTL Group, Inc (JTL). In addition, on January 31, 2003, JTL requested to remove the 1981 El Jay cone crusher from Permit #2659-02. Permit #**2659-03** replaced Permit #2659-02.

On November 27, 2006, JTL requested to remove the 1950 Roll Crusher from this permit. In addition, JTL requested to operate in certain particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) nonattainment areas for both winter and summer time. Permit #**2659-04** was also updated to reflect current permit language and rule references used by the Department. Permit #2659-04 and Addendum #1

replaced Permit #2659-03.

D. Current Permit Action

On January 24, 2008, the Department received a request from Knife River to change the name on Montana Air Quality Permit (MAQP) #2659-04 from JTL Group, Inc. to Knife River. The current permit action will transfer ownership of MAQP #2659-05 from JTL Group, Inc. to Knife River. In addition, Knife River requested that the permit be written in a de minimis-friendly manner and that the permit be updated to reflect the correct number and hp ratings of the diesel generators. The current permit action changes the existing engine rating of 400 kilowatts (kW) to one engine not to exceed 625 hp. The emission inventory was updated to reflect these changes. The current permit action also updates the permit to reflect current permit language and rule references used by the Department and changes the permit to a de minimis-friendly format. MAQP #2659-05 and Addendum #2 replaces MAQP #2659-04 and Addendum #1.

E. Additional Information

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

II. Applicable Rules and Regulations

The following are partial quotations of some applicable rules and regulations, which apply to the facility. The complete rules are stated in the ARM and are available upon request from the Department. Upon request, the Department will provide references for locations of complete copies of all applicable rules and regulations or copies where appropriate.

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

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.
3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source, or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

Knife River 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 use or cause or permit the use of any device or means which, without resulting in reduction in total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner that a public nuisance is created.

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

1. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
2. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
3. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
4. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
5. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀

Knife River 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 20% for all fugitive emission sources and reasonable precautions be taken to control emissions of airborne Particulate Matter (PM). (2) Under this rule, Knife River shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.
3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this section.
4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter in excess of the amount set forth in this section.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this section.
6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank truck or trailer is equipped with

a vapor loss control device as described in (1) of this rule.

7. ARM 17.8.340 Standard of Performance for New Stationary Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). The owner or operator of any stationary source or modification, as defined and applied in 40 CFR Part 60, NSPS, shall comply with the standards and provisions of 40 CFR Part 60.

- a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to an NSPS Subpart as listed below.
- b. 40 CFR 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants, indicates that NSPS requirements apply to portable crushing/screening facilities with capacities greater than 150 TPH and that were constructed after August 31, 1983. The current Knife River facility has a capacity in excess of 150 TPH and was constructed after August 31, 1983; therefore, NSPS requirements apply to the facility.
- c. 40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition (CI) Internal Combustion Engines (ICE), indicates that NSPS requirements apply to owners or operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE is manufactured after April 1, 2006, and is not a fire pump engine. Since this permit is written in a de minimis-friendly manner, this regulation may apply to engines at the facility.

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

- a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to a National Emission Standard for Hazardous Air Pollutants (NESHAPs) Subpart as listed below:
- b. 40 CFR 63, Subpart ZZZZ – NESHAPs for Stationary Reciprocating Internal Combustion Engines (RICE). As an area source, the diesel RICE at Knife River will be subject to this rule. However, although diesel RICE engines are an affected source, per 40 CFR 63.6590(b)(3) they do not have any requirements unless they are new or reconstructed after June 12, 2006. Any diesel RICE engine operated by Knife River that is new or reconstructed after June 12, 2006 will be subject to this Maximum Available Control Technology (MACT) standard if the engine remains or will remain at the permitted location for more than 12 months, or a shorter period of time for an engine located at a seasonal source. A seasonal source remains at a single location on a permanent basis (at least 2 years) and operates 3 months or more each year. Since the permit is written in a de minimis-friendly manner, area source provisions of the MACT requirements may apply to facility 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. Knife River shall 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. An application fee is not required for the current permit action because it is an administrative amendment.

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; the air quality operation fee is based on the actual or estimated amount of air pollutants emitted during the previous calendar year.

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 Permit—When Required. This rule requires a facility to obtain an air quality permit or permit alteration if they construct, alter or use any asphalt plant, crusher or screen that has the Potential to Emit (PTE) greater than 15 tons per year of any pollutant. Knife River has the potential to emit more than 15 tons per year of PM, PM₁₀, nitrogen oxides (NO_x), and carbon monoxide (CO); therefore a 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 are not subject to the Montana Air quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units -- Permit Application Requirements. (1) This rule requires that an application be submitted prior to the installation, alteration or use of a source. A permit application was not required for the current permit action because the permit change is considered an administrative permit change. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Knife River is not required to submit an affidavit of publication because the current permitting action is an administrative amendment.
6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and

operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.

7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability, which is technically practicable and economically feasible, except that BACT shall be utilized. A BACT analysis is not required because the current permitting action is an administrative amendment.
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 Knife River 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. A Montana air quality permit shall be valid until revoked, amended, or modified as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.
12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
13. ARM 17.8.764 Administrative Amendment of 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 which do not result in an increase in emissions because 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 air quality permit may be transferred from one location to another if the Department receives a

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

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

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
2. ARM 17.8.818 Review of Major Stationary Sources and Major Modification--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source since it is not a listed source and does not have the PTE more than 250 tons per year of any air pollutant (excluding fugitive emissions).

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

1. ARM 17.8.1201 Definitions. (23) A 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 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#2659-05 for Knife River, 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 of any one HAP, and less than 25 tons/year of a combination of all HAPs;
 - c. This source is not located in a serious PM₁₀ nonattainment area;
 - d. This facility is subject to a current NSPS standard (40 CFR 60, Subpart III and 40 CFR 60, Subpart OOO);
 - e. This facility may be subject to a current NESHAP standard (40 CFR 63,

Subpart ZZZZ);

- f. This source is not a Title IV affected source nor a solid waste combustion unit; and
- g. This source is not an EPA designated Title V source.

Based on these facts, the Department determined that Knife River will be a minor source of emissions as defined under Title V. However, if minor sources subject to NSPS or NESHAP are required to obtain a Title V Operating Permit, Knife River will be required to obtain a Title V operating permit.

III. BACT Determination

A BACT determination is required for each new or altered source. Knife River shall install on the new or altered source the maximum air pollution control capability, which is technically practicable and economically feasible, except that BACT shall be utilized. However, a BACT analysis is not required for the current permit action because it is an administrative amendment.

IV. Emission Inventory

Source*	Tons/Year					
	PM	PM ₁₀	NO _x	VOC	CO	SO _x
Crusher (up to 300 TPH)	1.58	0.71				
Two screens (up to 380 TPH)	3.66	1.23				
Truck Unloading	0.21	0.02				
Material Transfer	1.66	0.54				
Pile Forming	1.70	2.01				
Diesel Generator (engine up to 625 hp)	6.02	6.02	84.86	6.87	18.28	5.61
Haul Roads	12.68	3.60				
Total	27.51	14.13	84.86	6.87	18.28	5.61

Crushers (Up to 300 ton/hr)

Process Rate: 300 TPH
 Hours of operation: 8760 hr/yr

PM Emissions:

Emission Factor: 0.0012 lb/ton (AP-42 Table 11.19.2-2, 8/2004 - controlled)
 Hourly Calculations: 0.0012 lbs/ton * 300 ton/hr = 0.36 lb/hr
 Yearly Calculations: 0.36 lb/hr * 8760 hr/year * 0.0005 tons/lb = 1.58 tons/yr

PM₁₀ Emissions:

Emission Factor: 0.00054 lbs/ton (AP-42, Table 11.19.2-2, Controlled Emissions, 8/04)
 Hourly Calculations: 0.00054 lbs/ton * 300 ton/hr = 0.16 lb/hr
 Yearly Calculations: 0.16 lb/hr * 8760 hr/year * 0.0005 tons/lb = 0.71 tons/yr

Screens (up to 380 ton/hr)

Process Rate: 380 TPH
 Hours of operation: 8760 hr/yr

PM Emissions:

Emission Factor: 0.0022 lb/ton (AP-42 Table 11.19.2-2, 8/2004)
Hourly Calculations: 0.0022 lbs/ton * 380 ton/hr = 0.84 lb/hr
Yearly Calculations: 0.84 lb/hr * 8760 hr/year * 0.0005 tons/lb = 3.66 tons/yr

PM₁₀ Emissions:

Emission Factor: 0.00074 lbs/ton (AP-42, Table 11.19.2-2,8/04)
Hourly Calculations: 0.00074 lbs/ton * 380 ton/hr = 0.28 lb/hr
Yearly Calculations: 0.28 lb/hr * 8760 hr/year * 0.0005 tons/lb = 1.23 tons/yr

Material Transfer

Process Rate: 300 ton/hr
Hours of operation: 8760 hr/yr
Number of Transfers 9 Estimated

PM Emissions:

Emission Factor: 0.00014 lbs/ton (AP-42 Table 11.19.2-2, 8/2004 - controlled)
Calculations: 0.00014 lbs/ton * 300 tons/hr*9 transfers = 0.38 lb/hr
0.05 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 1.66 ton/yr

PM₁₀ Emissions:

Emission Factor: 0.000046 lbs/ton (AP-42 Table 11.19.2-2, 8/2004 - controlled)
Calculations: 0.000046 lbs/ton * 300 tons/hr * 9 transfers = 0.12 lb/hr
0.12 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.54 ton/yr

Pile Forming (2 Piles)

Process Rate: 300 ton/hr
Hours of operation: 8760 hr/yr

PM Emissions:

Emission Factor: 0.00322 lbs/ton (AP-42 Section 13.2.4.3, 11/2006 - controlled)
Calculations: 0.00322 lbs/ton * 300 tons/hr = 0.97 lb/hr
0.97 lbs/hr * 8760 hr/yr * 0.0005 ton/lb = 1.70 ton/yr

PM₁₀ Emissions:

Emission Factor: 0.00153 lbs/ton (AP-42 Section 13.2.4.3, 11/2006 - controlled)
Calculations: 0.00153 lbs/ton * 300 tons/hr = 0.46 lb/hr
0.90 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 2.01 ton/yr

Truck Loading

Process Rate: 300 ton/hr
Hours of operation: 8760 hr/yr
Number of Loads: 1 load (Estimated)

PM Emissions:

Emission Factor: 0.00016 lbs/ton (AP-42 Table 11.19.2-2, 8/2004 - controlled)
Calculations: 0.00016 lbs/ton * 300 tons/hr = 0.05 lb/hr
0.05 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.21 ton/yr

PM₁₀ Emissions:

Emission Factor: 0.000016 lbs/ton (AP-42 Table 11.19.2-2, 8/2004 - controlled)

Calculations: $0.000016 \text{ lbs/ton} * 300 \text{ tons/hr} = 0.0048 \text{ lb/hr}$
 $0.0048 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.02 \text{ ton/yr}$

Haul Roads

Vehicle Miles Traveled (VMT): 5 VMT/day (Estimated)
 Control Efficiency: 50% watering (included in emission factor)
 Rated Load Capacity: <50 tons

PM Emissions

Emission Factor: 13.90 lbs/VMT (AP-42 Chapter 13.2.2, 11/2006 - controlled)
 Calculations: $13.90 \text{ lbs/VMT} * 5 \text{ VMT/day} * 365 \text{ days/yr} * 0.0005 \text{ ton/lb} = 12.68 \text{ ton/yr}$

PM10 Emissions

Emission Factor: 3.95 lbs/VMT (AP-42 Chapter 13.2.2, 11/2006 - controlled)
 Calculations: $3.95 \text{ lbs/VMT} * 5 \text{ VMT/day} * 365 \text{ day/yr} * 0.0005 \text{ tons/lb} = 3.60 \text{ ton/yr}$

Diesel Generator (engine up to 625 hp)

Operating Hours: 8760 hr/yr
 Engine Size: 625 hp

PM Emissions:

Emission Factor: 0.0022 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, diesel fuel - 10/96)
 Calculations: $0.0022 \text{ lb/hp-hr} * 625 \text{ hp} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 6.02 \text{ ton/yr}$

PM10 Emissions:

Emission Factor: 0.0022 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, diesel fuel - 10/96)
 Calculations: $0.0022 \text{ lb/hp-hr} * 625 \text{ hp} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 6.02 \text{ ton/yr}$

NOx Emissions:

Emission Factor: 0.031 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, diesel fuel - 10/96)
 Calculations: $0.031 \text{ lb/hp-hr} * 625 \text{ hp} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 84.86 \text{ ton/yr}$

VOC Emissions:

Emission Factor: 0.00251 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, diesel fuel - 10/96)
 Calculations: $0.00251 \text{ lb/hp-hr} * 625 \text{ hp} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 6.87 \text{ ton/yr}$

CO Emissions:

Emission Factor: 0.00668 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, diesel fuel - 10/96)
 Calculations: $0.00668 \text{ lb/hp-hr} * 625 \text{ hp} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 18.28 \text{ ton/yr}$

SOx Emissions:

Emission Factor: 0.00205 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, diesel fuel - 10/96)
 Calculations: $0.00205 \text{ lb/hp-hr} * 625 \text{ hp} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 5.61 \text{ ton/yr}$

V. Existing Air Quality and Impacts

MAQP #2659-05 is issued for a portable crushing and screening facility to operate at various locations throughout Montana. MAQP #2659-05 contains operation conditions and limitations that would protect air quality for the site and surrounding area. Because the facility is a portable source that operates on an intermittent and temporary basis, any effects to air quality would be minor. In the view of the Department, the amount of controlled emissions generated by this project will not exceed any set ambient standard. In addition, the source is portable and will operate on an intermittent and temporary basis at any given location, so any air quality impacts

will be minimal.

VI. Taking or Damaging Implication Analysis

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

YES	NO	
		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.

VII. Environmental Assessment

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

Permit Analysis Prepared by: John Raudsep
Date: December 19, 2008

Addendum #2
Knife River Corporation
Permit #2659-05

An addendum to Montana Air Quality Permit (MAQP) #2659-05 is issued to Knife River Corporation (Knife River) pursuant to Sections 75-2-204 and 75-2-211 of the Montana Code Annotated (MCA), as amended, and the Administrative Rules of Montana (ARM) 17.8.765, as amended, for the following:

I. Permitted Equipment

Knife River operates a portable crushing and screening facility at various locations throughout Montana. This permit allows Knife River to operate a crusher (up to 300 tons/hour (TPH)), two screens (with a combined capacity up to 380 TPH), a diesel generator (up to 625 horsepower (hp)), and associated equipment.

II. Seasonal and Site Restrictions – Winter and Summer Seasons

Addendum #2 applies to the Knife River facility while operating at any location in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) nonattainment areas. Additionally, seasonal and site restrictions apply to the facility as follows:

A. During the winter season (October 1-March 31), the only locations in or within 10 km of certain PM₁₀ nonattainment areas where Knife River may operate:

- NW¼ of the NW¼ of Section 22, Township 29 North, Range 21 West (Knife River Main Pit)
- NE ¼ of the NE ¼ of Section 26, Township 29 North, Range 22 West (Tutvedt Pit)
- NW ¼ of the SE ¼ of Section 36, Township 30 North, Range 21 West (County Pit)
- SW ¼ of the SW ¼ of Section 2, Township 28 North, Range 21 West (River)
- SW ¼ of the NW ¼ of Section 2, Township 28 North, Range 21 West (River)
- Any other site that may be approved, in writing, by the Department of Environmental Quality (Department)

B. During the summer season (April 1-September 30), Knife River may operate at any location in or within 10 km of the Butte, Columbia Falls, Libby, Kalispell, Thompson Falls, and Whitefish PM₁₀ nonattainment areas.

C. Knife River shall comply with the limitations and conditions contained in Addendum #2 to MAQP #2659-05 while operating in or within 10 km of any of the previously identified PM₁₀ nonattainment areas. Addendum #2 shall be valid until revoked or modified. The Department reserves the authority to modify Addendum #2 at any time based on local conditions of any future site. These conditions may include, but are not limited to, local terrain, meteorological conditions, proximity to residences or other businesses, etc.

III. Limitations and Conditions

A. Operational Limitations and Conditions – Winter and Summer Season

1. All visible emissions from any crushing and screening plant shall not exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749, ARM 17.8.340, and 40 CFR 60, Subpart OOO).

2. All visible emissions from any equipment, such as transfer points, shall not exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749, ARM 17.8.340, and 40 CFR 60, Subpart OOO).
3. Water and spray bars shall be available on site at all times and operated as necessary to maintain compliance with the opacity limitations in Sections III.A.1 and III.A.2 (ARM 17.8.749).
4. Knife River shall not cause or authorize to be discharged into the atmosphere from haul roads, access roads, parking lots, or the general plant property any visible fugitive emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).
5. Knife River 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 10% opacity limitation in III.A.4 (ARM 17.8.749).
6. Crushing production from the facility is limited to 7,200 tons during any rolling 24-hour time period (ARM 17.8.749).
7. Screening production is limited to 9,120 tons during any rolling 24-hour time period (ARM 17.8.749).
8. Knife River shall operate one diesel generator with a maximum rated design capacity up to 625 hp, and operation shall not exceed 20-hours during any rolling 24-hour time period (ARM 17.8.749).

B. Operational Reporting Requirements

1. If this crushing/screening plant is moved to another nonattainment location, an Intent to Transfer form must be sent to the Department and a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The proof of publication (affidavit) of the Public Notice Form for Change of location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.749 and ARM 17.8.765).
2. Production information for the sites covered by this addendum must be maintained for five years and submitted to the Department upon request. The information must include (ARM 17.8.749):
 - a. Tons of material crushed at each site (including amount of recirculated/rerun material),
 - b. Tons of material screened by each screen at each site (including amount of recirculated/rerun material),
 - c. Tons of bulk material loaded at each site (production),
 - d. Daily hours of operation at each site,
 - e. Gallons of diesel fuel used for the generators/engines at each site,

- f. Hours of operation and size of generator at each site,
 - g. Fugitive dust information consisting of total miles driven on unpaved roads for all plant vehicles.
3. Knife River shall document, by day, the total crushing production. Knife River shall sum the total production during the previous 24 hours to verify compliance with the limitations in Section III.A.6. A written report of compliance verification and the emissions inventory shall be submitted to the Department annually. The report for the previous calendar year shall be submitted along with the annual emission inventory (ARM 17.8.749).
 4. Knife River shall document by day, the total screening production. Knife River shall sum the total production during the previous 24 hours to verify compliance with the limitations in Section III.A.7. A written report of compliance verification and the emissions inventory shall be submitted to the Department annually. The report for the previous calendar year shall be submitted along with the annual emission inventory (ARM 17.8.749).
 5. Knife River shall document, by day, the hours of operation of the diesel generator. Knife River shall sum the total hours during the previous 24 hours to verify compliance with the limitations in Section III.A.8. A written report of compliance verification and the emissions inventory shall be submitted to the Department annually. The report for the previous calendar year shall be submitted along with the annual emission inventory (ARM 17.8.749).

Addendum #2 Analysis
Knife River Corporation
Permit #2659-05

I. Permitted Equipment

Knife River Corporation (Knife River) operates a portable crushing and screening facility at various locations throughout Montana. This permit allows Knife River to operate a crusher (up to 300 tons/hour (TPH)), two screens (with a combined capacity up to 380 TPH), a diesel generator (up to 625 horsepower (hp)), and associated equipment. .

Addendum #2 applies to the Knife River crushing and screening facility while operating at any location in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) nonattainment areas during the summer months (April 1 – September 30) and at sites approved by the Department of Environmental Quality (Department) during the winter months (October 1 – March 31), including the initial site location: SW ¼ of the SW ¼ of Section 2, Township 28 North, Range 21 West.

II. Source Description

Knife River proposes to use this crushing and screening plant and associated equipment to crush and sort sand and gravel that will be used in various construction operations. For a typical operation, raw materials are screened and/or crushed. Material is separated by size and stockpiled for sale or use.

III. Applicable Rules and Regulations

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

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

- A. ARM 17.8.749 Conditions for Issuance of Permit. This rule requires that the source demonstrate compliance with applicable rules and standards before a permit can be issued. Also, a permit may be issued with such conditions as are necessary to assure compliance with all applicable rules and standards. Knife River demonstrated compliance with all applicable rules and standards as required for permit issuance.
- B. ARM 17.8.764 Modification of Permit. An air quality permit may be modified 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 which do not result in an increase in emissions because of the changed conditions. A source may not increase its emissions beyond those found in its permit unless the source applies for and receives another permit.
- C. ARM 17.8.765 Transfer of Permit. An air quality permit may be transferred from one location to another if:
 - 1. Written notice of Intent to Transfer location and proof of public notice are sent to the Department;

2. The source will operate in the new location for a period of less than 1 year; and
3. The source will not have any significant impact on any nonattainment area or any Class I area.

Knife River must submit proof of compliance with the transfer and public notice requirements when Knife River transfers to any of the locations covered by this addendum and will only be allowed to stay in the new location for a period of less than 1 year. Also, the conditions and limitations in Addendum #2 to Montana Air Quality Permit (MAQP) #2659-05 will prevent Knife River from having a significant impact on PM₁₀ nonattainment areas.

IV. Emission Inventory

Source	Lbs/day					
	PM	PM ₁₀	NO _x	VOC	CO	SO _x
Crushers (up to 300 TPH)	8.64	3.89				
Two screens (up to 380 TPH)	20.06	6.75				
Truck Loading	1.15	0.12				
Material Transfer	7.06	2.30				
Pile Forming	23.28	11.04				
Diesel Generator (engine up to 625 hp)*	27.50	27.50	387.50	31.38	83.50	25.63
Haul Roads	69.50	19.75				
Total	157.19	71.35	387.50	31.38	83.50	25.63

* The diesel generator is limited to 20-hours of operation per 24-hour rolling period.

Crushers (Up to 300 ton/hr)

Process Rate: 300 TPH
Hours of operation: 24 hr/day

PM Emissions:

Emission Factor: 0.0012 lb/ton (AP-42 Table 11.19.2-2, 8/2004 - controlled)
Hourly Calculations: 0.0012 lbs/ton * 300 ton/hr = 0.36 lb/hr
Daily Calculations: 0.36 lb/hr * 24 hr/day = 8.64 lbs/day

PM₁₀ Emissions:

Emission Factor: 0.00054 lbs/ton (AP-42, Table 11.19.2-2, Controlled Emissions, 8/04)
Hourly Calculations: 0.00054 lbs/ton * 300 ton/hr = 0.16 lb/hr
Yearly Calculations: 0.16 lb/hr * 24 hr/day = 3.89 lbs/day

Screens (up to 380 ton/hr)

Process Rate: 380 TPH
Hours of operation: 24 hr/day

PM Emissions:

Emission Factor: 0.0022 lb/ton (AP-42 Table 11.19.2-2, 8/2004)
Hourly Calculations: 0.0022 lbs/ton * 380 ton/hr = 0.84 lb/hr
Yearly Calculations: 0.84 lb/hr * 24 hr/day = 20.06 lbs/day

PM₁₀ Emissions:

Emission Factor: 0.00074 lbs/ton (AP-42, Table 11.19.2-2,8/04)
Hourly Calculations: 0.00074 lbs/ton * 380 ton/hr = 0.28 lb/hr
Yearly Calculations: 0.28 lb/hr * 24 hrs/day = 6.75 lb/day

Material Transfer

Process Rate: 300 ton/hr
Hours of operation: 24 hrs/day
Number of Transfers: 7 Estimated

PM Emissions:

Emission Factor: 0.00014 lbs/ton (AP-42 Table 11.19.2-2, 8/2004 - controlled)
Calculations: 0.00014 lbs/ton * 300 tons/hr * 7 transfers = 0.29 lb/hr
0.29 lb/hr * 24 hr/day = 7.06 lbs/day

PM₁₀ Emissions:

Emission Factor: 0.000046 lbs/ton (AP-42 Table 11.19.2-2, 8/2004 - controlled)
Calculations: 0.000046 lbs/ton * 300 tons/hr * 7 transfers = 0.096 lb/hr
0.096 lb/hr * 24 hr/day = 2.30 lbs/day

Pile Forming (2 Pile)

Process Rate: 300 ton/hr
Hours of operation: 24 hr/day

PM Emissions:

Emission Factor: 0.00322 lbs/ton (AP-42 Section 13.2.4.3, 11/2006 - controlled)
Calculations: 0.00322 lbs/ton * 300 ton/hr = 0.97 lb/hr
0.97 lb/hr * 24 hr/day = 23.28 lbs/day

PM₁₀ Emissions:

Emission Factor: 0.00153 lbs/ton (AP-42 Section 13.2.4.3, 11/2006 - controlled)
Calculations: 0.00153 lbs/ton * 300 tons/hr = 0.46 lb/hr
0.46 lb/hr * 24 hr/day = 11.04 lbs/day

Truck Loading

Process Rate: 300 ton/hr
Hours of operation: 24 hr/day
Number of Loads: 1 load (Estimated)

PM Emissions:

Emission Factor: 0.00016 lbs/ton (AP-42 Table 11.19.2-2, 8/2004 - controlled)
Calculations: 0.00016 lbs/ton * 300 tons/hr = 0.05 lb/hr
0.05 lb/hr * 24 hr/day = 1.15 lbs/day

PM₁₀ Emissions:

Emission Factor: 0.000016 lbs/ton (AP-42 Table 11.19.2-2, 8/2004 - controlled)
Calculations: 0.000016 lbs/ton * 300 tons/hr = 0.0048 lb/hr
0.0048 lb/hr * 24 hr/day = 0.12 lbs/day

Haul Roads

Vehicle Miles Traveled (VMT): 5 VMT/day (Estimated)
Control Efficiency: 50% watering (included in emission factor)
Rated Load Capacity: <50 tons

PM Emissions

Emission Factor: 13.90 lbs/VMT (AP-42 Chapter 13.2.2, 11/2006 - controlled)
Calculations: 13.90 lbs/VMT * 5 VMT/day = 69.50 lbs/day

PM10 Emissions

Emission Factor: 3.95 lbs/VMT (AP-42 Chapter 13.2.2, 11/2006 - controlled)

Calculations: 3.95 lbs/VMT * 5 VMT/day = 19.75 lbs/day

Diesel Generator (engine up to 625 hp)

Operating Hours: 20 hr/day

Engine Size: 625 hp

PM Emissions:

Emission Factor: 0.0022 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, diesel fuel - 10/96)

Calculations: 0.0022 lb/hp-hr * 625 hp * 20 hr/day = 27.50 lbs/day

PM10 Emissions:

Emission Factor: 0.0022 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, diesel fuel - 10/96)

Calculations: 0.0022 lb/hp-hr * 625 hp * 20 hr/day = 27.50 lbs/day

NOx Emissions:

Emission Factor: 0.031 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, diesel fuel - 10/96)

Calculations: 0.031 lb/hp-hr * 625 hp * 20 hr/day = 387.50 lbs/day

VOC Emissions:

Emission Factor: 0.00251 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, diesel fuel - 10/96)

Calculations: 0.00251 lb/hp-hr * 625 hp * 20 hr/day = 31.38 lbs/day

CO Emissions:

Emission Factor: 0.00668 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, diesel fuel - 10/96)

Calculations: 0.00668 lb/hp-hr * 625 hp * 20 hr/day = 83.50 lbs/day

SOx Emissions:

Emission Factor: 0.00205 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, diesel fuel - 10/96)

Calculations: 0.00205 lb/hp-hr * 625 hp * 20 hr/day = 25.63 lbs/day

V. Air Quality Impacts

On July 1, 1987, the Environmental Protection Agency (EPA) promulgated new National Ambient Air Quality Standards (NAAQS) for PM₁₀. Due to exceedance of the national standards for PM₁₀, the cities of Kalispell (and the nearby Evergreen area), Columbia Falls, Butte, Whitefish, Libby, Missoula, and Thompson Falls were designated by EPA as nonattainment for PM₁₀. As a result of this designation, EPA required the Department and the City-County Health Departments to submit PM₁₀ State Implementation Plans (SIP). The SIPs consisted of emission control plans that controlled fugitive dust emissions from roads, parking lots, construction, and demolition, since technical studies determined these sources to be the major contributors to PM₁₀ emissions.

Addendum #2 to MAQP #2659-05 is for a portable crushing and screening facility located at sites in or within 10 km of certain PM₁₀ nonattainment areas during the winter season (October 1 through March 31). Winter season operations may include only the locations listed in Section II.A of Addendum #2. Addendum #2 of Permit #2659-05 also allows for summertime operations (April 1 – September 30) at any location in or within 10 km of the Butte, Columbia Falls, Libby, Kalispell, Thompson Falls, and Whitefish PM₁₀ nonattainment areas. The more stringent operating conditions contained in the addendum will minimize any potential impact on the nonattainment areas and will protect NAAQS. Also, this facility is a portable source that would operate on an intermittent and temporary basis and any effects on air quality will be minor and

short-lived.

VI. Taking or Damaging Implication Analysis

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

YES	NO	
		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.

VII. Environmental Assessment

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

Permit Analysis Prepared by: John Raudsep
Date: December 19, 2008