



Montana Department of  
**ENVIRONMENTAL QUALITY**

Brian Schweitzer, Governor

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July 14, 2008

Jacqueline Flikkema  
Knife River Corporation  
PO Box 80066  
Billings, MT 59108

Dear Ms. Flikkema:

Air Quality Permit #3101-01 is deemed final as of July 14, 2008, by the Department of Environmental Quality (Department). This permit is for a portable crushing/screening 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) 444-3490

Kathleen Doran  
Environmental Engineer, P.E.  
Air Resources Management Bureau  
406) 247-4443

VW:kd  
Enclosure

Montana Department of Environmental Quality  
Permitting and Compliance Division

Air Quality Permit #3101-01

Knife River Corporation  
P.O. Box 80066  
Billings, MT 59108

July 14, 2008



## AIR QUALITY PERMIT

Issued To: Knife River Corporation - Billings  
P.O. Box 80066  
Billings, MT 59108-0066

Permit #3101-01  
Administrative Amendment (AA)  
Request Received: 01/24/08  
Department Decision on AA: 06/25/08  
Permit Final: 07/14/08  
AFS: #777-3101

An air quality permit with conditions is hereby granted to Knife River Corporation, hereinafter referred to as "Knife River," pursuant to Section 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

The two portable crushers and associated equipment are originally located at 1202 Shiloh Road in Billings, Montana. The legal location of the facility is in the SE $\frac{1}{4}$  of the S $\frac{1}{2}$  of Section 15, Township 1 South, Range 25 East in Yellowstone County, Montana. Permit #3101-01 applies while operating in 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 (PM<sub>10</sub>) nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* Permitted equipment can be found in Section I.A. of the permit analysis. An addendum will be required for locations in or within 10 km of certain PM<sub>10</sub> nonattainment areas.

#### B. Current Permit Action

On January 24, 2008, the Department received a request from Knife River to change the name on Permit #3101-00 from JTL Group, Inc. to Knife River. The current permit action will transfer ownership of Permit #3101-00 from JTL Group, Inc. to Knife River and update the permit to reflect current rule references, permit language, permit format, and emission factors. In addition, Knife River requested that the permit be written in a de minimis-friendly manner.

### Section II: Conditions and Limitations

#### A. Emission Limitations

1. All visible emissions from any Standards of Performance for New Stationary Source (NSPS)-affected crusher shall not exhibit an opacity of 15% or greater averaged over 6 consecutive minutes (ARM 17.8.340, ARM 17.8.752, 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, ARM 17.8.752, 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 17.8.304 and ARM 17.8.752).
4. Water and spray bars shall be available on site at all times, and operated as necessary, to maintain compliance with the opacity limitations in Section II.A.1, II.A.2, and II.A.3 (ARM 17.8.749 and 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.5 (ARM 17.8.749).
7. Knife River shall not operate more than two crushers at any given time and the combined maximum rated design capacity shall not exceed 800 tons per hour (TPH) (ARM 17.8.749).
8. Crushing production shall be limited to 1,600,000 tons during any rolling 12-month time period (ARM 17.8.749).
9. Knife River shall not operate more than four screens at any given time and the combined maximum rated design capacity shall not exceed 800 TPH (ARM 17.8.749).
10. Screening production shall be limited to 1,600,000 tons during any rolling 12-month time period (ARM 17.8.749).
11. 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).
12. Knife River shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart OOO (ARM 17.8.340 and 40 CFR 60, Subpart OOO).

B. Testing Requirements

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

C. Operational Reporting Requirements

1. If this crushing/screening operation is moved to another location, an Intent to Transfer form must be sent to the Department and a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The Intent to Transfer Form and the proof of publication (affidavit) of the Public Notice 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. 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 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. Knife River shall supply the Department with annual production information for all emission points, as required by the Department in the annual emissions 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 units 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 *the addition of a new emissions unit*, change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation. The notice must be submitted to the Department, in writing, 10 days prior to startup or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d).
5. Knife River shall document, by month, the crushing production from the facility. By the 25<sup>th</sup> day of each month, Knife River shall calculate the crushing production of the facility during the previous month. The monthly information will be used to verify compliance with the limitation in Section II.A.8. The information for each of the previous months shall be submitted along with the annual emissions inventory (ARM 17.8.749).
6. Knife River shall document, by month, the screening production from the facility. By the 25<sup>th</sup> day of each month, Knife River shall calculate the screening production from the facility for the previous month 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 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 or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, 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 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. Permit Fees - Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, the failure to pay the annual operation fee by Knife River may be grounds for revocation of this permit, as required by that section and ruled adopted thereunder by the Board.
- H. 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).
- 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 in 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 - Billings  
Permit #3101-01

I. Introduction/Process Description

Knife River Corporation (Knife River) owns and operates a portable crushing/screening operation to be operated at various locations across the State of Montana. The original location is 1202 Shiloh Road in Billings, Montana. The legal description of the facility is the SE¼ of the S½ of Section 15, Township 1 South, Range 25 East in Yellowstone County, Montana.

A. Permitted Equipment

Equipment used at the facility includes, but is not limited to the following:

At the request of the permittee, this permit has been written in a de minimis-friendly manner.

1. (2) crushers (up to 800 tons per hour (TPH) combined maximum capacity)
2. (4) screens (up to 800 TPH combined maximum capacity)
3. Associated equipment (conveyors, transfer points, etc.)

No engine/generator is permitted for use currently because Knife River utilizes landline power for this crushing/screening operation.

B. Process Description

The crushing/screening plant will be used to crush and sort sand and gravel materials for sale and use in construction operations. For a typical operational setup, pit-run material is fed into a hopper using a loader. The material is then conveyed from the hopper to the crusher. The crushed material is then conveyed to a stockpile for use in construction operations. Knife River utilizes an electrical power drop from a power pole for electrical generation.

C. Permit History

On December 22, 2000, the Department of Environmental Quality (Department) issued **Permit #3101-00** to JTL Group, Inc. (JTL) for the operation of two portable crushers and associated equipment.

D. Current Permit Action

On January 24, 2008, the Department received a request from Knife River to change the name on Permit #3101-00 from JTL to Knife River. The current permit action will transfer ownership of Permit #3101-00 from JTL to Knife River and update the permit to reflect current rule references, permit language, permit format, and emission factors. In addition, Knife River requested that the permit be written in a de minimis-friendly manner. **Permit #3101-01** replaces Permit #3101-00.

## Additional Information

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

## II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department. 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 Malfunction. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation, or to continue for a period greater than 4 hours.
5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.



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

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM<sub>10</sub>
11. ARM 17.8.230 Fluoride in Forage

Knife River must comply 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 (PM), 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, 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 PM.
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 section 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 tons per hour and that were constructed after August 31, 1983. The Knife River facility has a capacity in excess of 150 tons per hour and was constructed after August 31, 1983; therefore, NSPS requirements apply to the facility.

D. ARM 17.8, Subchapter 5, Air Quality Permit Application, Operation and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that Knife River submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. A permit fee is not required for the current permit action because the permit action is considered an administrative permit change.
2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department. The air quality operation fee is based on the actual or estimated actual 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 which 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 asphalt plant, crusher, or screen that has the potential to emit (PTE) greater than 15 tons per year of any pollutant. Knife River has a PTE greater than 15 tons per year of PM and particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</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. A permit application was not required for the current permit action because the current permit action is 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. An affidavit of publication of public notice was not required for the current permit action because the current permit action is considered an administrative permit change.
6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section III of this Permit Analysis.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving Knife River of the responsibility for complying with any other 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 (EIS).
11. ARM 17.8.760 Additional Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those applications that require an EIS.
12. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit; which, in no event, may be less than 1 year after the permit is issued.

13. 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).
  14. 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.
  15. 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.
  16. ARM 17.8.770 Additional Requirements for Incinerators. This rule specifies the additional information that must be submitted to the Department for incineration facilities subject to 75-2-215, Montana Code Annotated (MCA).
- 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 sub-chapter.
  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 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 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 Air Quality Permit #3101-01 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 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 subject to a current NSPS (40 CFR 60, Subpart OOO).
  - e. This facility is not subject to any current NESHAP standards.
  - f. This source is not a Title IV affected source or a solid waste combustion unit.
  - g. This source is not an EPA designated Title V source.

Based on these facts, the Department has determined that Knife River is a minor source of emissions with respect to Title V. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit, Knife River will be required to obtain an 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. A BACT determination was not required for the current permit action because the permit change is considered an administrative permit change.

### IV. Emission Inventory

Source	Tons/year					
	PM	PM-10	NO <sub>x</sub>	VOC	CO	SO <sub>x</sub>
Crushers (2-400 TPH each) -800 TPH combined max capacity	0.96	0.43				
Screens (4) – 800 TPH combined max capacity	1.76	0.59				
Bulk Loading	0.16	0.16				
Material Transfer	4.48	1.47				
Pile Forming	23.18	11.02				
Haul Roads	12.68	3.60				
Total	43.22	17.27				

\*\* Hours of operation for the crushing/screening operation is limited to 2000 hours per year (per 3101-00).

Nordberg Cone Crushers (400 TPH each)

Maximum Process Rate: 400 TPH  
Hours of Operation: 2000 hr/yr (no change from 3101-00)  
Number of Crushers: 2 crusher(s)

*PM Emissions*

Emission Factor: 0.0012 lbs/ton (AP-42, Table 11.19.2-2, 08/2004 - controlled)  
Calculations: 0.0012 lb/ton \* 400 ton/hr = 0.48 lb/hr  
0.48 lb/hr \* 2000 hr/yr \* 2 crushers \* 0.0005 ton/lb = 0.96 ton/yr

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

Emission Factor: 0.00054 lbs/ton (AP-42, Table 11.19.2-2, 08/2004 - controlled)  
Calculations: 0.00054 lbs/ton \* 400 ton/hr = 0.216 lb/hr  
0.216 lb/hr \* 2000 hr/yr \* 2 crushers \* 0.0005 ton/lb = 0.43 ton/yr

4 screens (1-scalping, 2-vibrating, 1-wash) – 800 TPH combined maximum

Maximum Process Rate: 800 TPH (maximum combined)  
Hours of Operation: 2000 hr/yr  
Number of Screens: 4 screen(s)

*PM Emissions*

Emission Factor: 0.0022 lbs/ton (AP-42, Table 11.19.2-2, 08/2004 - controlled)  
Calculations: 0.0022 lbs/ton \* 800 ton/hr = 1.76 lb/hr  
1.76 lb/hr \* 2000 hr/yr \* 0.0005 ton/lb = 1.76 ton/yr

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

Emission Factor: 0.00074 lbs/ton (AP-42, Table 11.19.2-2, 08/2004 - controlled)  
Calculations: 0.00074 lbs/ton \* 800 ton/hr = 0.59 lb/hr  
0.59 lb/hr \* 2000 hr/yr \* 0.0005 ton/lb = 0.59 ton/yr

Bulk Loading

Maximum Process Rate: 800 TPH  
Hours of Operation: 2000 hr/yr  
Number of Loads: 2 Load(s)

*PM Emissions*

Emission Factor: 1.00E-04 lbs/ton (AP-42, Table 11.19.2-2, 08/2004 – controlled)  
Calculations: 0.0001 lbs/ton \* 800 ton/hr = 0.08 lb/hr  
0.08 lb/hr \* 2000 hr/yr \* 2 load(s) \* 0.0005 ton/lb = 0.16 ton/yr

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

Emission Factor: 1.00E-04 lbs/ton (AP-42, Table 11.19.2-2, 08/2004 – controlled)  
Calculations: 0.0001 lbs/ton \* 800 ton/hr = 0.08 lb/hr  
0.08 lb/hr \* 2000 hr/yr \* 2 load(s) \* 0.0005 ton/lb = 0.16 ton/yr

### Material Transfer

Maximum Process Rate: 800 TPH  
Hours of Operation: 2000 hr/yr  
Number of Transfers: 40 Transfer(s)

#### *PM Emissions*

Emission Factor: 1.4E-04 lbs/ton (AP-42, Table 11.19.2-2, 08/2004 – controlled)  
Calculations: 0.00014 lbs/ton \* 800 ton/hr = 0.112 lb/hr  
0.112 lb/hr \* 2000 hr/yr \* 40 transfer(s) \* 0.0005 ton/lb = 4.48 ton/yr

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

Emission Factor: 4.60E-05 lbs/ton (AP-42, Table 11.19.2-2, 08/2004 – controlled)  
Calculations: 0.000046 lbs/ton \* 800 ton/hr = 0.0368 lb/hr  
0.0368 lb/hr \* 2000 hr/yr \* 40 transfer(s) \* 0.0005 ton/lb = 1.47 ton/yr

### Pile Forming

Maximum Process Rate: 800 TPH  
Hours of Operation: 2000 hr/yr  
Number of Piles: 9 Pile(s)

#### *PM Emissions*

Emission Factor: 3.22E-03 lbs/ton (AP-42, Section 13.2.4.3, 11/06 – controlled)  
Calculations: 0.00322 lbs/ton \* 800 ton/hr = 2.576 lb/hr  
2.576 lb/hr \* 2000 hr/yr \* 9 pile(s) \* 0.0005 ton/lb = 23.18 ton/yr

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

Emission Factor: 1.53E-03 lbs/ton (AP-42, Section 13.2.4.3, 11/2006 – controlled)  
Calculations: 0.00153 lbs/ton \* 800 ton/hr = 1.224 lb/hr  
1.224 lb/hr \* 2000 hr/yr \* 9 pile(s) \* 0.0005 ton/lb = 11.02 ton/yr

### Haul Roads

Vehicle Miles Traveled (VMT): 5 VMT/day  
Hours of Operation: 365 days/year

#### *PM Emissions*

Emission Factor (rated load capacity < 50 tons): 1.39E+01 lbs/VMT  
(AP-42, Chapter 13.2.2, 11/2006 – controlled)  
Calculations: 13.9 lbs/VMT \* 5 VMT/day = 69.5 lb/day  
69.5 lbs/day \* 365 day/yr \* 0.0005 ton/lb = 12.68 ton/yr

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

Emission Factor (rated load capacity < 50 tons): 3.95E+00 lbs/VMT  
(AP-42, Chapter 13.2.2, 11/2006 – controlled)  
Calculations: 3.95 lbs/VMT \* 5 VMT/day = 19.75 lb/day  
19.75 lbs/day \* 365 day/yr \* 0.0005 ton/lb = 3.60 ton/yr

## V. Existing Air Quality

Permit #3101-01 will cover the operation while operating at any location within Montana, excluding those counties that have a Department-approved permitting program, those areas considered Tribal Lands, or those areas in or within 10 kilometers (km) of certain PM<sub>10</sub> nonattainment areas.



VI. Air Quality Impacts

In the view of the Department, the amount of controlled emissions generated by the operation of the portable crushing/screening plant will not exceed any set ambient standard. In addition, this source is portable and any air quality impacts will be minimal and short-lived.

VII. Takings or Damaging Implication Analysis

As required by 2-10-101 through 105, MCA, the department has conducted a private property taking and damaging assessment and has determined there are no taking or damaging implications.

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.

VIII. Environmental Assessment

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

*Analysis prepared by: Kathleen Doran  
Date: June 12, 2008*