

AIR QUALITY PERMIT

Issued To:	Knife River Corporation	Permit #:	4200-00
	P.O. Box 9	Application Complete:	3/17/08
	Belgrade, MT 59714	Preliminary Determination Issued:	4/7/08
		Department's Decision Issued:	4/23/08
		Permit Final:	5/9/08
		AFS #:	777-4200

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. Permitted Equipment

Knife River owns and operates various crushing/screening equipment, concrete batch plants, and asphalt plants throughout the state of Montana. This permit is for the operation of a 500 ton per hour (TPH) crusher with a diesel engine rated up to 300-horsepower (hp). At the request of the permittee, this permit has been written in a de minimis-friendly manner for use in both attainment and nonattainment areas.

B. Plant Location

The crusher will initially be located in the northeast ¼ of Section 5, Township 7 South, Range 4 East, in Gallatin County, Montana. MAQP #4200-00 applies while operating at any location in Montana, except those areas having a Department of Environmental Quality (Department)-approved permitting program or areas considered tribal lands. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.*

MAQP #4200-00 was written to include Addendum #1 that will allow Knife River to operate 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 during the winter months (October 1 – March 31).

SECTION II: Conditions and Limitations

A. Emission Limitations

1. Knife River shall not cause or authorize to be discharged into the atmosphere from any Standards of Performance for New Stationary Sources (NSPS)-affected crusher, any visible emissions that exhibit an opacity of 15% or greater averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO).
2. Knife River shall not cause or authorize to be discharged into the atmosphere from any other NSPS-affected equipment, such as screens or conveyor transfers, any visible emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO).
3. Knife River shall not cause or authorize to be discharged into the atmosphere, from any non-NSPS affected equipment, any visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).

4. Water and water spray bars shall be available on site at all times and used, as necessary, to maintain compliance with the opacity limitations in Sections II.A.1, II.A.2, and II.A.3 (ARM 17.8.749).
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 one crusher at any given time and the maximum rated design capacity shall not exceed 500 TPH (ARM 17.8.749).
8. Crusher production from the facility shall be limited to 4,380,000 tons during any rolling 12-month time period (ARM 17.8.749).
9. Knife River shall not operate more than one diesel engine at any given time and the maximum rated design capacity of the diesel engine shall not exceed 300 hp (ARM 17.8.749).
10. 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 period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).
11. 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).
12. Knife River shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* and 40 CFR 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, for any applicable diesel engine (ARM 17.8.340 and 40 CFR 60, Subpart IIII and ARM 17.8.342, 40 CFR 63, Subpart ZZZZ).

B. Testing Requirements

1. Within 60 days after achieving maximum production, but no later than 180 days after initial start-up, an Environmental Protection Agency (EPA) Method 9 opacity test and/or other methods and procedures, as specified in 40 CFR Part 60.675, must be performed on all NSPS-affected equipment to demonstrate compliance with the emissions limitations contained in Sections II.A.1 and II.A.2 (ARM 17.8.340, 40 CFR Part 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 further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. If this equipment is moved to another location, an Intent to Transfer form must be sent to the Department's Air Resources Management Bureau 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. 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 not be limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

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

3. 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) (ARM 17.8.745).
4. 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, 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).
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).

SECTION III: Addendum #1

Knife River shall comply with all conditions in Addendum #1 to Permit #4200-00 when operating in or within 10 km of certain PM₁₀ nonattainment areas as described in the Addendum (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 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 for in ARM 17.8.740, *et seq.* (ARM 17.8.756)
- D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement 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 Fee – 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.
- 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.

Permit Analysis
Knife River Corporation
Permit #4200-00

I. Introduction/Process Description

Knife River Corporation (Knife River) owns and operates a portable 500 ton per hour (TPH) crusher that is operated by a 300 horsepower (hp) diesel engine. The crusher will initially be located in the northeast ¼ of Section 5, Township 7 South, Range 4 East, in Gallatin County, Montana.

A. Permitted Equipment

This permit is for the operation of a portable 500 TPH jaw crusher, with a 300-hp engine. At the request of the permittee, this permit has been written in a de minimis-friendly manner for use in both attainment and nonattainment areas.

B. Source Description

Knife River owns and operates various crushing/screening operations, concrete batch plants, and asphalt plants throughout the state of Montana. This crushing unit will be used, as needed, at various sites.

II. Applicable Rules and Regulations

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

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

1. ARM 17.8.101 Definitions. This rule 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 the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.
5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

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

1. ARM 17.8.210 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 less than 20% for all fugitive emission sources and that 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), including the following subparts:
 - a. 40 CFR 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants, in order for a crushing plant to be subject to the requirements of 40 CFR 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants, the facility must meet the definition of an affected facility and, the affected equipment must have been constructed, reconstructed, or modified after August 31, 1983. Based on the information submitted by Knife River, the portable crushing equipment to be used under Permit #4200-00 is subject to this subpart.
 - b. 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, 2005, and is not a fire pump engine. This NSPS will apply 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.

The proposed 300-hp diesel engine is a CI ICE manufactured after April 1, 2005. Therefore, NSPS requirements may apply to this particular engine. Furthermore, since this permit is written in a de minimis-friendly manner, NSPS requirements may apply to future engines.

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 Maximum Achievable Control Technology (MACT) Subpart as listed below:
 - b. 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). As an area source, any diesel RICE engine operated by Knife River that is new or reconstructed after June 12, 2006 will be subject to this 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.

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

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. Knife River submitted the appropriate permit application fee for the current permit action.

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

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

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit alteration to construct, alter or use any air contaminant sources that have the Potential to Emit (PTE) greater than 15 tons per year (TPY) of any pollutant. Knife River has a PTE greater than 15 TPY PM and oxides of nitrogen (NO_x); therefore, an air quality permit is required.
3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.
4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, alteration, or use of a source. Knife River submitted the required permit application for the current permit action. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Knife River submitted an affidavit of publication of public notice for the February 10, 2008, issue of the *Bozeman Daily Chronicle*, a newspaper of general circulation in the City of Bozeman in Gallatin County, as proof of compliance with the public notice requirements.
6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section III of this permit analysis.

8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
 9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving 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. 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.
 12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
 13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
 14. ARM 17.8.765 Transfer of Permit. (1) This rule states that an 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 the facility's PTE is less than 250 tons per year of any pollutant (excluding fugitive emissions).

- G. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:
1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any stationary source having:
 - a. PTE > 100 tons/year of any pollutant;
 - b. PTE > 10 tons/year of any one hazardous air pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or
 - c. PTE > 70 tons/year of particulate matter with an aerodynamic diameter of 10 microns or less (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 Montana Air Quality Permit (MAQP) #4200-00 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 PM₁₀ nonattainment area.
 - d. This facility is subject to current NSPS standards (40 CFR 60, Subpart A General Provisions, Subpart OOO, Non-Metallic Mineral Processing Plants, and potentially Subpart IIII).
 - e. This facility may be subject to a NESHAP standard (40 CFR 63, Subpart ZZZZ).
 - 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.

Knife River is not a major source and, thus a Title V operating permit is not required. However, the crusher and diesel engine will likely be operated with other emitting units and, in that case, may be considered to be part of the same source as the other facilities. If this equipment is used in conjunction with other permitted equipment owned by Knife River, on contiguous or adjacent property and with the same Standard Industrial Classification (SIC) Code, this source could have a potential to emit greater than the 100 TPY threshold for the Title V operating permit program. If this situation arises, Knife River is expected to amend their permits so that federally-enforceable permit limits can be included to keep the potential emissions below major source permitting thresholds or to apply for and receive 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.

Crusher

Knife River shall not cause or authorize to be discharged into the atmosphere from any NSPS-affected crusher any visible emissions that exhibit an opacity of 15% or greater averaged over 6 consecutive minutes. Knife River shall not cause to be discharged into the atmosphere from any other NSPS-affected equipment, such as conveyor transfers, any visible emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes. Knife River shall not cause to be discharged into the atmosphere from any non-NSPS affected equipment any visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.

Knife River must also take reasonable precautions to limit the fugitive emissions of airborne particulate matter from haul roads, access roads, parking areas, and the general plant property. Knife River is required to use water spray bars and water and/or chemical dust suppressant, as necessary, to maintain compliance with the opacity and reasonable precaution limitations. The Department determined that using water spray bars and water and/or chemical dust suppressant to maintain compliance with the opacity requirements and reasonable precaution limitations constitutes BACT for these sources.

Diesel Engines

Because of the limited amount of emissions produced by the diesel engine and the lack of readily available/cost effective add-on controls, add-on controls would be cost prohibitive. Therefore, the Department determined that proper operation and maintenance, with no additional controls would constitute BACT for the diesel engine.

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

IV. Emission Inventory (Potential)

Source	Potential Emissions (TPY)					
	PM	PM ₁₀	NO _x	VOC	CO	SO _x
Jaw Crusher (up to 500 TPH)	2.63	1.18				
Truck Unloading	0.04	0.04				
Material Transfer (Conveyor/Stacker)	0.92	0.31				
Pile Forming	7.05	3.37				
Bulk Loading	0.04	0.04				
Diesel Engine (300 hp)	2.85	2.85	40.56	3.33	8.76	2.67
Haul Roads	12.68	3.60				
TOTAL EMISSIONS	26.21	11.39	40.56	3.33	8.76	2.67

2006 Metso Jaw Crusher (up to 500 TPH)

Process Rate: 500 ton/hr 4,380,000 tons/year
 Hours of operation: 8760 hr/yr

PM Emissions (controlled):

Emission Factor: 0.0012 lbs/ton (AP-42 Section 11.19.2-2, 8/2004)
Calculations: 0.0012 lbs/ton * 500 ton/hr = 0.60 lb/hr
0.6 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 2.63 ton/yr

PM₁₀ Emissions (controlled):

Emission Factor: 0.00054 lbs/ton (AP-42 Section 11.19.2-2, 8/2004)
Calculations: 0.00054 lbs/ton * 500 ton/hr = 0.27 lb/hr
0.27 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 1.18 ton/yr

Truck Unloading

Process Rate: 500 ton/hr
Number of Loads 1 Load
Hours of operation: 8760 hr/yr

PM Emissions (controlled):

Emission Factor: 1.60E-05 lbs/ton (AP-42 Section 11.19.2-2, 8/2004)
Calculations: 0.000016 lbs/ton * 500 ton/hr * 1 Load = 0.008 lb/hr
0.008 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.04 ton/yr

PM₁₀ Emissions (controlled):

Emission Factor: 1.60E-05 lbs/ton (AP-42 Section 11.19.2-2, 8/2004)
Calculations: 0.000016 lbs/ton * 500 ton/hr * 1 Load = 0.008 lb/hr
0.008 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.04 ton/yr

Material Transfer (Conveyor/Stacker)

Process Rate: 500 ton/hr
Number of Transfers 3 Transfers
Hours of operation: 8760 hr/yr

PM Emissions (controlled):

Emission Factor: 0.00014 lbs/ton (AP-42 Section 11.19.2-2, 8/2004)
Calculations: 0.00014 lbs/ton * 500 tons/hr * 3 Transfers = 0.21 lb/hr
0.21 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.92 ton/yr

PM₁₀ Emissions (controlled):

Emission Factor: 4.60E-05 lbs/ton (AP-42 Section 11.19.2-2, 8/2004)
Calculations: 0.000046 lbs/ton * 500 ton/hr * 3 Transfers = 0.07 lb/hr
0.07 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.31 ton/yr

Pile Forming

Process Rate: 500 ton/hr
Number of Piles 1 Piles
Hours of operation: 8760 hr/yr

PM Emissions (controlled):

Emission Factor: 0.00322 lbs/ton (AP-42 Section 13.2.4 (1/95))
Calculations: 0.00322 lbs/ton * 500 ton/hr * 1 Piles = 1.61 lb/hr
1.61 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 7.05 ton/yr

PM₁₀ Emissions (controlled):

Emission Factor: 0.00153 lbs/ton (AP-42 Section 13.2.4 (1/95))
Calculations: 0.00153 lbs/ton * 500 ton/hr * 1 Piles = 0.77 lb/hr
0.77 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 3.37 ton/yr

Bulk Loading

Process Rate: 500 ton/hr
Number of Loads 1 load
Hours of operation: 8760 hr/yr

PM Emissions (controlled):

Emission Factor: 1.60E-05 lbs/ton (AP-42 Section 11.19.2-2, 8/2004)
Calculations: 0.000016 lbs/ton * 500 ton/hr * 1 load = 8.00E-03 lb/hr
0.008 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.035 ton/yr

PM₁₀ Emissions (controlled):

Emission Factor: 1.60E-05 lbs/ton (AP-42 Section 11.19.2-2, 8/2004)
Calculations: 0.000016 lbs/ton * 500 ton/hr * 1 load = 8.00E-03 lb/hr
0.008 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.035 ton/yr

Haul Roads

Vehicle miles traveled (estimate): 5.0 VMT/day
Control Efficiency is included in Emission Factor

PM Emissions (controlled):

Emission Factor (Rated Load Capacity <50 tons): 13.90 Lbs/VMT (AP-42 Section 13.2.2 (12/03))
Calculations: (5 VMT/day)(13.90 Lbs/VMT) = 69.5 lb/day
12.68 ton/yr

PM₁₀ Emissions (controlled):

Emission Factor (Rated Load Capacity <50 tons): 3.95 Lbs/VMT (AP-42 Section 13.2.2 (12/03))
Calculations: (5 VMT/day)(3.95 Lbs/VMT)"= 19.75 lb/day
3.60 ton/yr

Diesel Engine (300 hp)

Horsepower = 300 Hp 1 kW = 1.341 hp
BTU/hr = 2.1 MMBTU/hr 1 Hp-hr = 7000 BTU
Hours of Operation: 8760 hrs/yr

PM Emissions

Emission Factor: 0.31 lbs/MMBtu (De minimis-Friendly (worst-case) AP-42, 3.3-1, 10/96)
Calculations: 2.1 MMBTU/hr * 0.31 lbs/MMBtu = 0.65 lb/hr
0.65 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 2.85 ton/yr

PM₁₀ Emissions

Emission Factor: 0.31 lbs/MMBtu (De minimis-Friendly (worst-case) AP-42, 3.3-1, 10/96)
Calculations: 2.1 MMBTU/hr * 0.31 lbs/MMBtu = 0.65 lb/hr
0.65 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 2.85 ton/yr

NO_x Emissions

Emission Factor: 4.41 lbs/MMBtu (De minimis-Friendly (worst-case) AP-42, 3.3-1, 10/96)
Calculations: 2.1 MMBTU/hr * 4.41 lbs/MMBtu = 9.26 lb/hr
9.26 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 40.56 ton/yr

VOC Emissions

Emission Factor: 0.36 lbs/MMBtu (De minimis-Friendly (worst-case) AP-42, 3.3-1, 10/96)
Calculations: 2.1 MMBTU/hr * 0.36 lbs/MMBtu = 0.76 lb/hr
0.76 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 3.33 ton/yr

CO Emissions

Emission Factor: 0.95 lbs/MMBtu (De minimis-Friendly (worst-case) AP-42, 3.3-1, 10/96)
Calculations: 2.1 MMBTU/hr * 0.95 lbs/MMBtu = 2.00 lb/hr
2 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 8.76 ton/yr

SO_x Emissions

Emission Factor: 0.29 lbs/MMBtu (De minimis-Friendly (worst-case) AP-42, 3.3-1, 10/96)
Calculations: 2.1 MMBTU/hr * 0.29 lbs/MMBtu = 0.61 lb/hr
0.61 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 2.67 ton/yr

V. Air Quality Impacts

Based on the information provided and the conditions established in MAQP #4200-00, the amount of controlled emissions generated by this facility will not exceed any set ambient air quality standards. The conditions in MAQP #4200-00 will be protective of air quality while Knife River is operating at locations not located in or within 10 km of certain PM₁₀ nonattainment areas. The limitations and conditions established in Addendum #1 would further reduce emissions in the nonattainment areas and would be protective of the ambient air quality standards. Lastly, this facility is a portable source that would operate on an intermittent and temporary basis, so any effects to air quality will be minor and short-lived.

VI. Ambient Air Impact Analysis

The Department determined, based on the relatively small amount of emissions resulting from the Knife River facility and the limits and conditions established in MAQP #4200-00, that the impact from this permitting action will be minor. The Department believes it will not cause or contribute to a violation of any ambient air quality standard.

VII. Taking or Damaging Implication Analysis

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

VIII. Environmental Assessment

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

Addendum #1
Knife River Corporation
Permit #4200-00

An addendum to Montana Air Quality Permit (MAQP) #4200-00 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 owns and operates a portable 500 tons per hour (TPH) crusher with a diesel engine rated up to 300 horsepower (hp). At the request of the permittee, this permit has been written in a de minimis-friendly manner for use in both attainment and nonattainment areas.

II. Seasonal and Site Restrictions

Addendum #1 applies to Knife River's portable crusher with a diesel engine 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 location(s) in or within 10 km of certain PM₁₀ nonattainment areas where Knife River may operate is any 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 #1 to MAQP #4200-00 while operating in or within 10 km of any of the previously identified PM₁₀ nonattainment areas. Addendum #1 shall be valid until revoked or modified. The Department reserves the authority to modify Addendum #1 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 Season (October 1 – March 31) and Summer Season (April 1 - September 30)**
 - 1. Knife River shall not cause or authorize to be discharged into the atmosphere from the facility any visible emissions which exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).
 - 2. Water and water spray bars shall be available on site at all times and operated, as necessary, to maintain compliance with the opacity limitation in Section III.A.1 (ARM 17.8.749).
 - 3. 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).

4. 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. Knife River shall treat all unpaved portions of the haul roads, access roads, parking lots, and general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the 10% opacity limitation (ARM 17.8.308, ARM 17.8.749).
5. Knife River shall not operate more than one crushing unit at any given time and the maximum rated design capacity of the crusher shall not exceed 12,000 tons per day (ARM 17.8.749).
6. Knife River shall not operate more than one diesel engine at any given time and the maximum rated design capacity of the diesel engine shall not exceed 300 hp (ARM 17.8.749).

B. Operational Reporting Requirements

1. If this crusher and diesel engine is moved to another nonattainment location, an Intent to Transfer form must be sent to the Department's Air Resources Management Bureau 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. Operating information for the sites covered by this addendum must be maintained for 5 years and submitted to the Department with the annual emission inventory upon request. The information must include (ARM 17.8.749):
 - a. Daily hours of operation of the diesel engine at each site;
 - b. Daily gallons of diesel fuel used for the diesel engine at each site;
 - c. Daily tons of product crushed at each site (including amount of recirculated/ rerun material); and
 - d. Fugitive dust information consisting of the total miles driven on unpaved roads for all plant vehicles.

Addendum #1 Analysis
Knife River Corporation
Permit #4200-00

I. Permitted Equipment

Knife River Corporation (Knife River) owns and operates a portable 500 tons per hour (TPH) crusher with a diesel engine rated up to 300 horsepower (hp). At the request of the permittee, this permit has been written in a de minimis-friendly manner for use in both attainment and nonattainment areas.

II. Source Description

Knife River owns and operates various crushing/screening operations, concrete batch plants, and asphalt plants throughout the state of Montana. This portable crushing unit with a diesel engine will be operated by Knife River at various sites.

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 of Environmental Quality (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 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, the Clean Air Act of Montana, and rules adopted under those acts.
- B. ARM 17.8.764 Administrative Amendment To 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 one year. Also, the conditions and limitations in Addendum #1 to Montana Air Quality Permit (MAQP) #4200-00 will prevent Knife River from having a significant impact on particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) nonattainment areas.

IV. Emission Inventory

Winter & Summer Seasons

Source	Allowable Emissions (lbs/day)					
	PM	PM ₁₀	NO _x	VOC	CO	SO _x
Jaw Crusher (up to 500 TPH)	14.40	6.48				
Truck Unloading	0.24	0.24				
Material Transfer (Conveyor/Stacker)	5.04	1.68				
Pile Forming	38.64	18.48				
Bulk Loading	0.24	0.24				
Diesel Engine (300 hp)	15.60	15.60	222.24	18.24	48.00	14.64
Haul Roads	69.60	19.68				
TOTAL EMISSIONS	143.76	62.40	222.24	18.24	48.00	14.64

*The complete emissions inventory is on file with the Department.

V. Existing Air Quality

On July 1, 1987, the Environmental Protection Agency (EPA) promulgated new National Ambient Air Quality Standards (NAAQS) for PM₁₀. Due to exceedances 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, the EPA required the Department and the City-County Health Departments to submit PM₁₀ State Implementation Plans (SIPs). The SIPs consisted of emission control plans that controlled fugitive dust emissions from roads, parking lots, construction, and demolition, since technical studies identified these sources to be major contributors to PM₁₀ emissions.

Addendum #1 to MAQP #4200-00 is for a portable crusher with a diesel engine to locate at sites in or within 10 kilometers (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 #1 or at locations that are approved, in writing, by the Department. Addendum #1 to MAQP #4200-00 would also allow 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 the 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. Air Quality Impacts

Knife River applied for an air quality permit to operate a portable crusher with a diesel engine to be located at various locations throughout Montana. MAQP #4200-00 and Addendum #1 will cover the Knife River portable crusher with a diesel engine while operating at any location within

Montana, excluding those counties that have a Department-approved permitting program and those areas considered tribal lands. Based on the information provided, the amount of controlled emissions generated by this facility will not exceed any ambient air quality standard. In addition, this source is portable and any air quality impacts will be minimal.

VII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, Montana Code Annotated (MCA), the Department conducted a private property taking and damaging assessment and determined there are no taking or damaging implications.

VIII. Environmental Assessment

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

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

FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued To: Knife River Corporation
PO Box 9
Belgrade, MT 59714

Air Quality Permit Number: 4200-00

Preliminary Determination Issued: April 7, 2008

Department Decision Issued: April 23, 2008

Permit Final: May 9, 2008

1. *Legal Description of Site:* Knife River owns and operates a portable 500 TPH crusher that is operated by a diesel engine. The crusher will initially be located in the northeast ¼ of Section 5, Township 7 South, Range 4 East, in Gallatin County, Montana. However, MAQP #4200-00 would apply while operating at any location in Montana, except within those areas having a Department-approved permitting program or those areas considered tribal lands. A *Missoula County air quality permit would be required for locations within Missoula County, Montana*. Addendum #1 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).
2. *Description of Project:* On February 11, 2008, the Department received a permit application from Knife River for the operation of a portable crusher with a 300-hp diesel engine. Knife River requested that this permit be written in a de minimis friendly manner for use in both attainment and nonattainment areas.
3. *Objectives of Project:* Knife River owns and operates various crushing/screening operations, concrete batch plants, and asphalt plants throughout the state of Montana. This crusher will be used as needed at various sites. The issuance of MAQP #4200-00 with Addendum #1 would allow Knife River to operate 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).
4. *Alternatives Considered:* In addition to the proposed action, the Department considered the "no-action" alternative. The "no-action" alternative would deny issuance of the MAQP to the proposed facility. However, the Department does not consider the "no-action" alternative to be appropriate because Knife River demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the "no-action" alternative was eliminated from further consideration.
5. *A Listing of Mitigation, Stipulations, and Other Controls:* A listing of the enforceable permit conditions and a permit analysis, including a Best Available Control Technology (BACT) analysis, would be contained in MAQP #4200-00.

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

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

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

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

A. Terrestrial and Aquatic Life and Habitats

This permitting action would have a minor effect on terrestrial and aquatic life and habitats, as the proposed project would affect an existing, industrial property that has already been disturbed. Furthermore, the air emissions would have only minor effects on terrestrial and aquatic life because facility emissions would be well dispersed in the area of the operations (see Section 7.F of this EA) and would have intermittent and seasonal operations. Therefore, only minor and temporary effects to terrestrial and aquatic life and habitat would be expected from the proposed project.

B. Water Quality, Quantity, and Distribution

Water would be required for dust suppression on the surrounding roadways and general plant area. This water use would only cause minor, if any, impacts to water resources because the facility is small and only a small volume of water would be required to be used. In addition, the facility would emit air pollutants, and corresponding deposition of pollutants would occur, as described in Section 7.F. of this EA. However, the Department determined that, due to dispersion characteristics of pollutants and conditions that would be placed in MAQP #4200-00, any impacts from deposition of pollutants on water quality, quantity, and distribution would be minor.

C. Geology and Soil Quality, Stability, and Moisture

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

D. Vegetation Cover, Quantity, and Quality

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

E. Aesthetics

The crusher with diesel engine would be visible and would create noise while operating at the existing mining site. However, the site is located approximately 1,000 feet from the nearest residence, and MAQP #4200-00 would include conditions to control emissions from the operation. The crusher and engine would be portable, would operate on an intermittent and seasonal basis, and would be a small industrial source. Therefore, any visual aesthetic impacts would be short-lived and minor.

F. Air Quality

Air quality impacts from the proposed project would be minor because this new source would operate on an intermittent and temporary basis. In addition, MAQP #4200-00 would require that water be used to control particulate emissions from the surrounding roadways and general plant area. MAQP #4200-00 would also limit any additional Knife River equipment operated at the site to 250 TPY or less, excluding fugitive emissions. Additionally, Addendum #1 would apply while the facility is operating in or within 10 km of a certain PM₁₀ nonattainment areas and would impose more stringent requirements for operations within those areas.

Further, the Department determined that this crusher and diesel engine would be a minor source of emissions as defined under the Title V Operating Permit Program because the source's potential to emit is below the major source threshold level of 100 TPY for any regulated pollutant. Pollutant deposition from the facility would be minimal because the pollutants emitted would be widely dispersed (from factors such as wind speed and wind direction) and would have minimal deposition on the surrounding area. Therefore, air quality impacts from operating the diesel engine in this area would be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The Department, in an effort to assess any potential impacts to any unique endangered, fragile, or limited environmental resources in the initial proposed area of operation (northeast ¼ of Section 5, Township 7 South, Range 4 East, in Gallatin County, Montana), contacted the Natural Resource Information System – Montana Natural Heritage Program. Search results concluded there are five species of concern within the area. The search area, in this case, is defined by the section, township, and range of the proposed site, with an additional 1-mile buffer. The known species of concern include four vertebrates: the Gray Wolf (Endangered), Canada Lynx and Grizzly Bear (Threatened), and Wolverine (Sensitive), as well as one vascular plant: Slender Indian Paintbrush.

While these species may be found within the search area, these animals may have many miles of potential habitat. Specific effects of operating the crusher with diesel engine in this area would be minor since the facility is relatively small in size, and would have only seasonal and intermittent operations in the area. Therefore, the Department determined that any effects upon these species would be minor and short-lived.

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

Due to the relatively small size of the project, only small demands on environmental resources would be required for proper operation. Only small quantities of water would be required for dust suppression of particulate emissions being generated at the site. In addition, impacts to air resources would be minor because the source is a minor industrial source of emissions, with intermittent and seasonal operations, and because air pollutants generated by the facility would be widely dispersed as described in Section 7.F of this EA. Energy requirements would also be small, as the diesel engine would use small amounts of fuel. Overall, any impacts to water, air, and energy resources would be minor.

I. Historical and Archaeological Sites

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

J. Cumulative and Secondary Impacts

The operation of the crusher and diesel engine would cause minor cumulative and secondary impacts to the physical and biological aspects of the human environment because the facility would be limited in the amount of PM₁₀, oxides of Nitrogen (NO_x), carbon monoxide (CO), Volatile Organic Compounds (VOC), and oxides of Sulfur (SO_x) emissions to be generated. Emissions and noise generated from the equipment would, at most, result in only minor impacts to the area of operations because the crusher and diesel engine would be seasonal and temporary. The proposed project would be short-term in nature, and have minor cumulative effects upon resources within the area. These resources include water, terrestrial and aquatic life, soils, and vegetation. Overall, cumulative and secondary impacts to the physical and biological aspects of the human environment would be minor.

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

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

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

A. Social Structures and Mores

The operation of the crusher and diesel engine would cause no disruption to the social structures and mores in the area because the source is a minor industrial source of emissions and would only have temporary and intermittent operations. Further, the facility would be required to operate according to the conditions that would be placed in MAQP #4200-00 and Addendum #1, which would limit the effects to social structures and mores.

B. Cultural Uniqueness and Diversity

The cultural uniqueness and diversity of this area would not be impacted by the operation of the proposed crusher and diesel engine because the facility is a portable source, with seasonal and intermittent operations.

C. Local and State Tax Base and Tax Revenue

The operation of the crusher and diesel engine would have little, if any, impact on the local and state tax base and tax revenue because the facility would be a minor industrial source of emissions and would have seasonal and intermittent operations. Knife River currently utilizes approximately four employees at the current site; no new employees would be hired as a result of this project. Thus, only minor impacts to the local and state tax base and revenue could be expected from the employees and facility production. Furthermore, the impacts to local tax base and revenue would be minor because the source would be portable and the money generated for taxes would be widespread.

D. Agricultural or Industrial Production

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

E. Human Health

MAQP #4200-00 would incorporate conditions to ensure that the crusher and diesel engine would be operated in compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health. As described in Section 7.F. of this EA, the air emissions from this facility would be minimized by the use of water spray and other operational limits that would be required by MAQP #4200-00. Also, the facility would be operating on a temporary basis and pollutants would disperse from the ventilation of emissions at this site (see Section 7.F of this EA). Therefore, only minor impacts would be expected on human health from the proposed project.

F. Access to and Quality of Recreational and Wilderness Activities

The proposed initial location is situated at an existing mining operation site. There are no known access routes to recreational or wilderness activities on the site, although there is access to the Big Sky recreation area at the Junction with Highway 64, located 0.5 miles to the North of the site.

Noise from the crusher and diesel engine would be minimal because the facility would be small, and the nearest residence is over 1,000 feet away. Also, the crusher and diesel engine would operate on a seasonal and intermittent basis on private land and would be a relatively minor industrial source of emissions. Therefore, any changes in the quality of recreational and wilderness activities created by operating the equipment at this site would be expected to be minor and intermittent.

G. Quantity and Distribution of Employment

The crusher and diesel engine would only require a few existing employees to operate and would have seasonal and intermittent operations. No individuals would be expected to permanently relocate to this area of operation as a result of operating the diesel engine. Therefore, no effects upon the quantity and distribution of employment in this area would be expected.

H. Distribution of Population

The crusher and diesel engine is a portable industrial facility that would only require employees currently employed by Knife River to operate. No individuals would be expected to permanently relocate to the area as a result of operating the diesel engine. Therefore, the crusher and diesel engine would not impact the normal population distribution in the initial area of operation or any future operating site.

I. Demands of Government Services

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

J. Industrial and Commercial Activity

The operation of the crusher and diesel engine would represent only a minor increase in the industrial activity in the proposed area of operation because the source would be a relatively small industrial source that would be portable and temporary in nature. No additional industrial or commercial activity would be expected as a result of the proposed operation.

K. Locally Adopted Environmental Plans and Goals

Knife River would be allowed, by MAQP #4200-00, to operate in areas designated by EPA as attainment or unclassified for ambient air quality. Addendum #1 to MAQP #4200-00 would allow Knife River to operate 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).

MAQP #4200-00 would contain operational restrictions for protecting air quality and to keep facility emissions in compliance with any applicable ambient air quality standards, as a locally adopted environmental plan or goal for operating at this proposed site. Because the crusher and diesel engine is a portable source and would have intermittent and seasonal operations, any impacts from the project would be minor and short-lived.

L. Cumulative and Secondary Impacts

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

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

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permitting action is for the operation of a portable crushing unit with a diesel engine rated at 300-hp. MAQP #4200-00 would include conditions and limitations to ensure the facility will operate in compliance with all applicable rules and regulations. In addition, there are no significant impacts associated with this proposal.

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

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

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