DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air Resources Management Bureau
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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 PM_{10} 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 PM_{10} 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 PM_{10} 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 PM_{10}, 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 PM_{10} 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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