Montana Department of
ENVIRONMENTAL QUALITY
Brian Schweitzer, Governor
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January 5, 2009

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

Dear Ms. Flikkema:

Air Quality Permit #4254-00 is deemed final as of January 5, 2009, by the Department of Environmental Quality (Department). This permit is for a portable drum mix asphalt plant. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,

Vickie Walsh
Air Permitting Program Supervisor
Air Resources Management Bureau
(406) 444-9741

Trista Glazier
Air Quality Specialist
Air Resources Management Bureau
(406) 444-3403

VW:TG
Enclosure

Montana Department of Environmental Quality
Permitting and Compliance Division

Air Quality Permit #4254-00

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

January 5, 2008

MONTANA AIR QUALITY PERMIT

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

Permit: #4254-00
Application Complete: 10/6/08
Preliminary Determination Issued: 11/12/08
Department's Decision Issued: 12/17/08
Permit Final: 1/5/08
AFS #: 777-4254

An air quality permit, 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 proposes to operate a portable hot mix asphalt plant and associated equipment which will initially be located in Section 14, Township 30 North, Range 21 West, in Flathead County, Montana. A complete list of permitted equipment is contained in Section I.A. of the Permit Analysis to Permit #4254-00.

B. Plant Location

Permit #4254-00 applies while operating at any location in Montana, except those areas having a Department of Environmental Quality (Department)-approved permitting program, areas considered tribal lands, or areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) nonattainment areas. *A Missoula County air quality permit will 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). A description of the permitted equipment is contained in the permit analysis.

SECTION II: Conditions and Limitations

A. Emission Limitations

1. Asphalt plant particulate matter (PM) emissions shall be limited to 0.04 grains per dry standard cubic feet (gr/dscf) (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart I).

2. Knife River shall not cause or authorize to be discharged into the atmosphere from the asphalt plant operations any stack emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart I).

3. Knife River shall not cause or authorize to be discharged into the atmosphere from systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler; systems for mixing hot mix asphalt; and

the loading, transfer, and storage systems associated with emission control systems, any visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart I).

4. Water and spray bars shall be available on site at all times and operated as necessary to maintain compliance with the opacity limitations in Section II.A.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 PM (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. A pulse jet baghouse for PM air pollution control, with a device to measure the pressure drop (magnehelic gauge, manometer, etc.), shall be installed, operated, and maintained on the asphalt drum mix dryer. Pressure drop must be measured in inches of water. Temperature indicators at the control device inlet and outlet must be installed and maintained (ARM 17.8.752).

8. Pressure drop on the wet scrubber control device and process temperature must be recorded daily and kept on site according to Section II.C.4 (ARM 17.8.749).

9. Asphalt production shall be limited to 1,200,000 tons during any rolling 12-month time period (ARM 17.8.749 and ARM 17.8.1204).

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, and notification requirements contained in 40 CFR 60, Subpart I, Standards of Performance for Hot Mix Asphalt Facilities (ARM 17.8.340 and 40 CFR 60, Subpart I).

B. Testing Requirements

1. Within 60 days after achieving the maximum production rate, but not later than 180 days after initial start-up, an initial Environmental Protection Agency (EPA) Methods 1-5 and 9 source test(s) shall be performed on any New Source Performance Standards (NSPS) affected equipment at the asphalt plant to demonstrate compliance with the applicable emission limit(s) in Section II.A.1, Section II.A.2, and Section II.A.3, respectively. NSPS-affected equipment at the Knife River facility would include any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler; systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems, which were constructed, reconstructed, or modified after June

11, 1973. After the initial source test, testing shall continue on an every 4-year basis or according to another testing/monitoring schedule as may be approved by the Department in writing (ARM 17.8.105, ARM 17.8.749, and 40 CFR 60, Subpart A and Subpart I).

2. Pressure drop on the wet scrubber control device and process temperature must be recorded during the compliance source test and reported as part of the test results (ARM 17.8.749).

3. Once a stack test is performed, the asphalt production rate shall be limited to the average production rate during the last source test demonstrating compliance (ARM 17.8.749).

4. Knife River may retest at a higher production rate at any time in order to achieve a higher allowable production rate (ARM 17.8.749).

5. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

6. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. If this asphalt plant is moved to another location, an Intent to Transfer form must be sent to the Department and a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The 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(l)(d) (ARM 17.8.745).

4. Knife River shall maintain on-site records showing daily production rates and daily baghouse pressure drop and temperature readings 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 asphalt production from the facility. By the 25th day of each month, Knife River shall calculate the asphalt production from the facility for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.8. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

6. Knife River shall annually certify that its emissions are less than those that would require the facility to obtain an air quality Title V operating permit as required by ARM 17.8.1204(3)(b. The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emission inventory information (ARM 17.8.749 and ARM 17.8.1204).

D. Notification

1. Within 30 days of commencement of construction of any NSPS-affected equipment, Knife River shall notify the Department of the date of commencement of construction of the affected equipment. NSPS-affected equipment at the Knife River facility would include any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler; systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems, which were constructed, reconstructed, or modified after June 11, 1973 (ARM 17.8.340 and 40 CFR 60, Subpart A and Subpart I).

2. Within 15 days of the actual startup date of any NSPS-affected equipment, Knife River shall submit written notification to the Department of the initial startup date of the affected equipment. NSPS-affected equipment at the Knife River facility would include any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler; systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems, which were constructed, reconstructed, or modified after June 11, 1973 (ARM 17.8.340 and 40 CFR 60, Subpart A and Subpart I).

3. Within 15 days of the actual startup date of any non-NSPS affected equipment, Knife River shall submit written notification to the Department of the initial startup date of the affected equipment (ARM 17.8.749).

SECTION III: General Conditions

A. Inspection – Knife River shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.

B. Waiver – The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if Knife River fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Knife River of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided 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 or areas considered tribal lands.

Permit Analysis
Knife River Corporation
Permit #4254-00

I. Introduction/Process Description

A. Permitted Equipment

Knife River owns and operates a portable hot mix asphalt plant with a maximum capacity of 200 tons per hour (TPH) with an attached baghouse and associated equipment. The plant includes the following equipment:

- Drum dryer with a maximum production capacity of 200 TPH - controlled by a pulse jet baghouse;
- 5-bin aggregate feed system;
- Feed conveyor;
- Four hot bin batch tower;
- Cyclone;
- Lime silo;
- Hot Storage silo;
- Hot asphalt cement storage tank;
- Hot oil heater (25,000 gallon);
- Burner;
- Drag slat elevator; and
- Associated equipment.

B. Source Description

A typical operation begins by loading the aggregate and recycled asphalt product into hoppers. Material is transported via an incline conveyor, through a scalping screen, up to the weigh conveyor, and into the rotary drum dryer/mixer. The material is completely dried and conveyed to the pugmill where it is mixed with hot asphalt oil and lime. A pulse jet baghouse is used to control particulate emissions from the asphalt plant drum and lime silo. The asphalt mixture is then loaded into haul trucks from the pugmill and taken to the project site.

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 PM_{10}

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. (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 17.8.340 Standard of Performance for New Stationary Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). Based on the information submitted by Knife River, the portable 1996 Astec batch asphalt plant and associated equipment are NSPS (40 CFR 60, Subpart A, General Provisions, and Subpart I, Standards of Performance of Hot Mix Asphalt Facilities) affected sources.

   a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to an NSPS Subpart as listed below:

   b. 40 CFR 60, Subpart I – Standards of Performance of Hot Mix Asphalt Facilities. In order for an asphalt plant to be subject to this subpart, 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 asphalt plant equipment to be used under Permit #4254-00 is subject to this subpart.

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 asphalt plant, crusher or screen that has the potential to emit (PTE) greater than 15 tons per year of any pollutant. Knife River has a PTE greater than 15 tons per year of particulate matter (PM), particulate matter with a diameter of 10 micrograms or less (PM_{10}), oxides of nitrogen (NO_x), volatile organic compounds (VOC), and sulfur dioxide (SO_2); 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 October 2, 2008, issue of the *Daily Inter Lake*, a newspaper of general circulation in the Town of Kalispell in Flathead 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 because it is not a listed source and the facility's PTE is less than 250 tons per year of any pollutant (excluding fugitive emissions).

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

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any stationary source having:

   a. PTE > 100 tons/year of any pollutant;

   b. PTE > 10 tons/year of any one hazardous air pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or

   c. PTE > 70 tons/year of PM_{10} in a serious PM_{10} nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (1) Title V of the FCAA Amendments of 1990 requires that all sources, as defined in ARM 17.8.1204 (1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #4254-00 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 PM_{10} nonattainment area.

   d. This facility is subject to a current NSPS (40 CFR 60, Subpart I).

   e. This facility is not subject to any current NESHAP standards.

   f. This source is not a Title IV affected source or a solid waste combustion unit.

   g. This source is not an EPA designated Title V source.

   Based on these facts, The Department has determined that Knife River is not subject to Title V Operating Permit requirements because federally enforceable limitations have been established that limit the source's PTE below the major source threshold. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit, Knife River will be required to obtain an operating permit.

   h. ARM 17.8.1204(3). The Department may exempt a source from the requirement to obtain an air quality operating permit by establishing federally enforceable limitations which limit that source's PTE.

      i. In applying for an exemption under this section the owner or operator of the facility shall certify to the Department that the source's PTE does not require the source to obtain an air quality operating permit.

      ii. Any source that obtains a federally enforceable limit on PTE shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit.

3. ARM 17.8.1207 Certification of Truth, Accuracy, and Completeness. The compliance certification submittal by ARM 17.8.1204(3) shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this subchapter shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

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.

Asphalt Drum Mixer

The Department has reviewed available methods of controlling emissions from the drum mixer, as well as previous BACT determinations. The following control options have been reviewed by the Department in order to make the following BACT determinations:

- Fabric Filter Baghouse
- Electrostatic Precipitator
- Cyclone
- Wet Scrubber

All of the listed control technologies are deemed technically feasible for this application. Technically feasible control options, in order of the highest control efficiency to the lowest control efficiency, based on PM_{10} control, are as follows:

1) Fabric Filter Baghouse (90 – 99+% efficient)
2) Electrostatic Precipitator (90 – 99+% efficient)
3) Wet Scrubber (70 – 95% efficient)
4) Wet Scrubber (<70% efficient)

Knife River has proposed to use a pulse jet baghouse for the control of PM_{10} from the displaced air from the asphalt plant. Because Knife River proposes to use a control technology that is capable of achieving the appropriate emissions standards, no further economic analysis is needed. All asphalt particulate emissions are limited to 0.04 grains per dry standard cubic foot (gr/dscf).

Further, Knife River must take reasonable precautions to limit the fugitive emissions of airborne PM on haul roads, access roads, parking lots, and the general plant area. Reasonable precautions include treating 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. Operating and maintaining a fabric filter baghouse to meet the corresponding emission limitations in Section I.A. of the permit and using water and/or chemical dust suppressant to comply with the reasonable precautions limitation will constitute BACT for the Knife River facility.

IV. Emission Inventory

	Tons/year (TPY) - restricted					
Source	PM	PM_{10}	NOx	VOC	CO	SOx
Drum Mix Asphalt Plant Dryer	29.32	16.86	33.00	78.00	19.20	34.80
Drum Mix Plant Load-Out	0.31	0.20	0.00	0.81	2.50	0.00
Asphalt Product Silo Filing	0.35	0.15	0.00	0.71	7.31	0.00
Cold Aggregate Screens and Storage Bins	12.96	7.92	0.00	0.00	0.00	0.00
Cold Aggregate Handling/Conveyors	10.80	3.96	0.00	0.00	0.00	0.00
Cold Aggregate Storage Piles	5.96	2.83	0.00	0.00	0.00	0.00
Lime Silo	1.50	1.50	0.00	0.00	0.00	0.00
Haul Roads/Vehicle Traffic	5.28	1.50	0.00	0.00	0.00	0.00
TOTAL	**66.49**	**34.92**	**33.00**	**79.52**	**29.01**	**34.80**

Operating Parameters:

Operating Hours: 6000 hr/yr
Plant Elevation 3000 ft. Department Information
Actual Pressure 26.82 in. Hg Department Information
Standard Pressure 29.92 in. Hg
Flowrate 45,000 acfm (Company Information)
Std. Temp: 25 C 77 F 537 R
Assumed Stack Temp. 149 C 300 F 760 R
Correction Equation: V1 = V2 (P2/P1) (T1/T2)
Corr. Flowrate 45000 acfm * (26.82 in. Hg / 29.92 in. Hg) * (537 R / 760 R) = 28502 dscfm
Process Rate: 200 ton/hr (Company Information)

Drum Mix Asphalt Plant Dryer

PM Emissions
Emission Factor: 0.04 gr/dscf (permit limit)
Calculations: 0.04 gr/dscf * 28501.6755206867 dscfm * 1 lb/7000 gr * 60 m/hr = 9.77 lb/hr
9.77 lb/hr * 6000 hr/yr * 0.0005 ton/lb = 29.32 ton/yr

PM10 Emissions
Emission Factor: 0.023 lb/ton (AP-42, Section 11.1, Table 11.1-3, Drum Mix, Fabric Filter Control, 3/04)
Calculations: 0.023 lb/ton * 200 ton/hr = 5.62 lb/hr
5.62 lb/hr * 6000 hr/yr * 0.0005 ton/lb = 16.86 ton/yr

NOx Emissions
Emission Factor: 0.055 lb/ton (AP-42, Section 11.1, Table 11.1-7, Drum Mix, worst-case fuel excluding coal, 3/04)
Calculations: 0.055 lb/ton * 200 ton/hr = 11.00 lb/hr
11 lb/hr * 6000 hr/yr * 0.0005 ton/lb = 33.00 ton/yr

CO Emissions
Emission Factor: 0.13 lb/ton (AP-42, Section 11.1, Table 11.1-7, Drum Mix, worst-case fuel excluding coal, 3/04)
Calculations: 0.13 lb/ton * 200 ton/hr = 26.00 lb/hr
26 lb/hr * 6000 hr/yr * 0.0005 ton/lb = 78.00 ton/yr

VOC Emissions
Emission Factor: 0.032 lb/ton (AP-42, Section 11.1, Table 11.1-8, worst-case fuel, 3/04)
Calculations: 0.032 lb/ton * 200 ton/hr = 6.40 lb/hr
6.4 lb/hr * 6000 hr/yr * 0.0005 ton/lb = 19.20 ton/yr

SOx Emissions
Emission Factor: 0.058 lb/ton (AP-42, Section 11.1, Table 11.1-7, Drum Mix, worst-case fuel excluding coal, 3/04)
Calculations: 0.058 lb/ton * 200 ton/hr = 11.60 lb/hr
11.6 lb/hr * 6000 hr/yr * 0.0005 ton/lb = 34.80 ton/yr

Drum Mix Plant Load-Out
Process Rate: 200 ton/hr (Company Information)
Hours of Operation: 6000 hr/yr (Annual Capacity)

PM Emissions
Emission Factor: 0.00052 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, see predictive equation at end of Inventory)
Calculations: 0.00052 lb/ton * 200 ton/hr * 6000 hr/yr * 0.0005 ton/lb = 0.31 ton/yr

PM10 Emissions
Emission Factor: 0.00034 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, see predictive equation at end of Inventory)
Calculations: 0.00034 lb/ton * 200 ton/hr * 6000 hr/yr * 0.0005 ton/lb = 0.20 ton/yr

CO Emissions
Emission Factor: 0.00135 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, see predictive equation at end of Inventory)
Calculations: 0.00135 lb/ton * 200 ton/hr * 6000 hr/yr * 0.0005 ton/lb = 0.81 ton/yr

VOC Emissions (VOC = TOC)
Emission Factor: 0.00416 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, see predictive equation at end of Inventory)
Calculations: 0.00416 lb/ton * 200 ton/hr * 6000 hr/yr * 0.0005 ton/lb = 2.50 ton/yr

Asphalt Product Silo Filing
Process Rate: 200 ton/hr (Company Information)
Hours of Operation: 6000 hr/yr (Annual Capacity)

PM Emissions
Emission Factor: 0.00059 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, see predictive equation at end of Inventory)
Calculations: 0.00059 lb/ton * 200 ton/hr * 6000 hr/yr * 0.0005 ton/lb = 0.35 ton/yr

PM10 Emissions
Emission Factor: 0.00025 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, see predictive equation at end of Inventory)
Calculations: 0.00025 lb/ton * 200 ton/hr * 6000 hr/yr * 0.0005 ton/lb = 0.15 ton/yr

CO Emissions
Emission Factor: 0.00118 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, see predictive equation at end of Inventory)
Calculations: 0.00118 lb/ton * 200 ton/hr * 6000 hr/yr * 0.0005 ton/lb = 0.71 ton/yr

VOC Emissions (VOC = TOC)
Emission Factor: 0.01219 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, see predictive equation at end of Inventory)
Calculations: 0.01219 lb/ton * 200 ton/hr * 6000 hr/yr * 0.0005 ton/lb = 7.31 ton/yr

Cold Aggregate Screens and Storage Bins

Process Rate: 200 tons/hr (Company Information)
Number of Transfers: 6 Transfers (Assumed)
Hours of operation: 6000 hr/yr (Annual Capacity)

PM Emissions
Emission Factor: 0.0036 lbs/ton (AP-42, Section 11.19, Table 11.19.2-2, Fines Screening, Controlled, 8/04)
Calculations: 0.0036 lbs/ton * 200 tons/hr * 6000 hr/yr * 0.0005 ton/lb * 6 Transfers = 12.96 ton/yr

PM10 Emissions:
Emission Factor: 0.0022 lbs/ton (AP-42, Section 11.19, Table 11.19.2-2, Fines Screening, Controlled, 8/04)
Calculations: 0.0022 lbs/ton * 200 tons/hr * 6000 hr/yr * 0.0005 ton/lb * 6 Transfers = 7.92 ton/yr

Cold Aggregate Handling/Conveyors

Process Rate: 200 tons/hr (Company Information)
Number of Transfers: 6 Transfers (Assumed)
Hours of operation: 6000 hr/yr (Annual Capacity)

PM Emissions
Emission Factor: 0.003 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, Conveyor Transfer, Controlled, 8/04)
Calculations: 0.003 lb/ton * 200 tons/hr * 6000 hr/yr * 0.0005 ton/lb * 6 Transfers = 10.80 ton/yr

PM10 Emissions
Emission Factor: 0.0011 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, Conveyor Transfer, Controlled, 8/04)
Calculations: 0.0011 lb/ton * 200 tons/hr * 6000 hr/yr * 0.0005 ton/lb * 6 Transfers = 3.96 ton/yr

Cold Aggregate Storage Piles

Process Rate: 200 ton/hr (Company Information)
Number of Piles: 3 Piles (Assumed)
Hours of Operation: 6000 hr/yr (Annual Capacity)

PM Emissions
Emission Factor: 0.00331 lb/ton (AP-42, Section 13.2.4, Table 13.2.4.3, see predicitve emission factor equation at end of inventory, 11/06)
Calculations: 0.00331 lb/ton * 200 ton/hr * 6000 hr/yr * 0.0005 ton/lb * 3 Piles = 5.96 ton/yr

PM10 Emissions
Emission Factor: 0.00157 lb/ton (AP-42, Section 13.2.4, Table 13.2.4.3, see predicitve emission factor equation at end of inventory, 11/06)
Calculations: 0.00157 lb/ton * 200 ton/hr * 6000 hr/yr * 0.0005 ton/lb * 3 Piles = 2.83 ton/yr

Lime Silo

Flow Capacity: 1000 cfm (Similar Source Information)

PM Emissions
Emission Factor: 0.04 gr/dscf (Permit Limit)
Calculations: 0.04 gr/dscf * 1000 cfm * 60 min/hr * 1 lb/7000 gr = 0.34 lb/hr
0.34 lb/hr * 8760 hr/yr *0.0005 ton/lb = 1.50 ton/yr

PM10 Emissions
Emission Factor: 0.04 gr/dscf (Permit Limit)
Calculations: 0.04 gr/dscf * 1000 cfm * 60 min/hr * 1 lb/7000 gr = 0.34 lb/hr
0.34 lb/hr * 8760 hr/yr *0.0005 ton/lb = 1.50 ton/yr

Haul Roads/Vehicle Traffic
Vehicle miles traveled: 5 VMT/day (Estimated)
Days Per Year: 365 days/year
Operation: 10 hours/day

PM Emissions
Emission Factor: 13.90 lb/VMT (AP-42, Section 13.2.2, Controlled Emissions, 12/03)

Calculation: 13.9 lb/VMT * 5 VMT/day * 365 days/year * (10hr/24hr) * 0.0005 ton/lb = 5.28 ton/yr

PM10 Emissions
Emission Factor: 3.95 lb/VMT (AP-42, Section 13.2.2, Controlled Emissions, 12/03)
Calculation: 3.95 lb/VMT * 5 VMT/day * 365 days/year (10 hrs/24 hrs) * 0.0005 ton/lb = 1.50 ton/yr

PREDICTIVE EMISSION FACTOR DEVELOPMENT EQUATIONS

Drum or Batch Mix Asphalt Plant Load-Out Emission Factor Development
(AP-42, Section 11.1, Table 11.1-14, Plant Load-Out, 3/04)

PM Emission Factor
Emission Factor = 0.000181 + 0.00141(-V)e((0.0251(T + 460) - 20.43) = 0.00052 lb/ton
Where: V = -0.5 (assume default value provided in AP-42)
T = 325 Faranheit (assume default value provided in AP-42)

PM10 Emission Factor
Emission Factor = 0.00141(-V)e((0.0251(T + 460) - 20.43) = 0.00034 lb/ton
Where: V = -0.5 (assume default value provided in AP-42)
T = 325 Faranheit (assume default value provided in AP-42)

VOC Emission Factor (assume VOC = TOC)
Emission Factor = 0.0172(-V)e((0.0251(T + 460) - 20.43) = 0.00416 lb/ton
Where: V = -0.5 (assume default value provided in AP-42)
T = 325 Faranheit (assume default value provided in AP-42)

CO Emission Factor
Emission Factor = 0.00558(-V)e((0.0251(T + 460) - 20.43) = 0.00135 lb/ton
Where: V = -0.5 (assume default value provided in AP-42)
T = 325 Faranheit (assume default value provided in AP-42)

Asphalt Product Silo Filing
(AP-42, Section 11.1, Table 11.1-14, Silo Filing, 3/04)

PM Emission Factor
Emission Factor = 0.00032 + 0.00105(-V)e((0.0251(T + 460) - 20.43) = 0.00059 lb/ton
Where: V = -0.5 (assume default value provided in AP-42)
T = 325 Faranheit (assume default value provided in AP-42)

PM10 Emission Factor

Emission Factor = 0.00105(-V)e((0.0251(T + 460) - 20.43) = 0.00025 lb/ton
Where: V = -0.5 (assume default value provided in AP-42)
T = 325 Faranheit (assume default value provided in AP-42)

VOC Emission Factor (assume VOC = TOC)

Emission Factor = 0.0504(-V)e((0.0251(T + 460) - 20.43) = 0.01219 lb/ton
Where: V = -0.5 (assume default value provided in AP-42)
T = 325 Faranheit (assume default value provided in AP-42)

CO Emission Factor

Emission Factor = 0.00488(-V)e((0.0251(T + 460) - 20.43) = 0.00118 lb/ton
Where: V = -0.5 (assume default value provided in AP-42)
T = 325 Faranheit (assume default value provided in AP-42)

Cold Aggregate Storage Pile Fugitive Dust Emission Factor Development
(AP-42, Section 13.2.4, Table 13.2.4.3, Predictive Equations, 11/06)

PM Emission Factor

Emission Factor = k(0.0032) ((U/5)1.3 / (M/2)1.4) = 0.00331 lb/ton
Where: k =Particle Size Multiplier (dimensionless) (assume PM < 30 microns = 0.74)
U = Mean Wind Speed (mph) (assume 10 mph)
M = Material Moisture Content (percent) (assume 3.0%)

PM10 Emission Factor

Emission Factor = k(0.0032) ((U/5)1.3 / (M/2)1.4) = 0.00157 lb/ton
Where: k =Particle Size Multiplier (dimensionless) (assume PM < 10 microns = 0.35)
U = Mean Wind Speed (mph) (assume 10 mph)
M = Material Moisture Content (percent) (assume 3.0%)

V. Air Quality Impacts

Permit #4254-00 is issued for the operation of a portable drum mix asphalt plant to be initially located in Section 14, Township 30 North, Range 21 West, in Flathead County, Montana. Permit #4254-00 will also cover the plant while operating at any location within Montana, excluding those counties that have a Department-approved permitting program, those areas considered tribal lands, or those areas in or within 10 kilometers (km) of certain PM_{10} nonattainment areas. An Addendum 1 applies when operating at locations in or within 10 km of certain PM_{10} nonattainment areas. *A Missoula County air quality permit would be required for locations within Missoula County.* In the view of the Department, the amount of controlled emissions generated by this facility will not exceed any set ambient standard.

VI. Ambient Air Impact Analysis

The Department determined, based on ambient air modeling, 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 2-10-105, MCA, the Department conducted the following private property taking and damaging assessment.

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	X	7a. Is the impact of government action direct, peculiar, and significant?
	X	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	X	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	X	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

Based on this analysis, the Department determined there are no taking or damaging implications associated with this permit action.

VIII. Environmental Assessment

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

Addendum 1
Permit #4254-00

An addendum to Montana Air Quality Permit #4254-00 is hereby granted to Knife River Corporation (Knife River) pursuant to Section 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.765, as amended, for the following:

I. Permitted Equipment:

Knife River owns and operates a portable drum mix asphalt plant consisting with a maximum capacity of 200 tons per hour (TPH)), and associated equipment.

II. Seasonal and Site Restrictions – **Winter and Summer Seasons**

Addendum 1 applies to the Knife River facility while operating at any location in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) 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 in or within 10 km of a PM_{10} nonattainment area where Knife River may operate is:

1. Kalispell – Section 14, Township 30 North, Range 21 West; and

2. Any other site that may be approved, in writing, by the Department of Environmental Quality (Department).

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

C. Knife River shall comply with the limitations and conditions contained in Addendum 1 to Permit #4254-00 while operating in or within 10 km of any of the previously identified PM_{10} 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

1. Asphalt plant particulate matter (PM) emissions shall be limited to 0.04 grains per dry standard cubic feet (gr/dscf) (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart I).

2. Knife River shall not cause or authorize to be discharged into the atmosphere from the asphalt plant operations any stack emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart I).

3. Knife River shall not cause or authorize to be discharged into the atmosphere from systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler; systems for mixing hot mix asphalt; and the loading,

transfer, and storage systems associated with emission control systems, any visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart I).

4. Water spray bars must be available and operated, as necessary**,** on the crushers, screens, and all transfer points whenever the crushing/screening plant is in operation (ARM 17.8.749).

5. Knife River shall not cause or authorize to be discharged into the atmosphere from any equipment, such as screens or transfer points, any visible emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).

6. 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 (ARM 17.8.749).

7. Knife River shall treat all unpaved portions of the 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 17.8.749).

8. Knife River shall not operate more than one asphalt plant at any one time. Total asphalt production shall not exceed the following (ARM 17.8.749):

   a. 1,280 tons/day during the winter season (October 1-March 31)
   b. 3,280 tons/day during the summer season (April 1-September 30)

B. Operational Reporting Requirements

1. If this asphalt plant is moved to another nonattainment location, an Intent to Transfer form must be sent to the Department and a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.749 and ARM 17.8.765).

2. Production information for the sites covered by this addendum must be maintained for five years and submitted to the Department upon request. The information must include (ARM 17.8.749):

   a. Tons of asphalt produced by each asphalt plant at each site,

   b. Daily hours of operation at each site,

   c. Fugitive dust information consisting of the total miles driven on unpaved roads for all plant vehicles:

3. Knife River shall document, by day, the total asphalt production. Knife River shall sum the total asphalt production for the previous day to verify compliance with the limitation in Section III.A.5. A written report of compliance and the emissions inventory shall be submitted to the Department annually. The report for the previous calendar year shall be submitted and may be submitted along with the annual emissions inventory (ARM 17.8.752).

Addendum 1 Analysis
Knife River
Permit #4254-00

I. Permitted Equipment

Knife River Corporation (Knife River) owns and operates a portable hot mix asphalt plant with a maximum capacity of 200 tons per hour (TPH) with an attached baghouse and associated equipment. The plant includes the following equipment:

- Drum dryer with a maximum production capacity of 200 TPH - controlled by a pulse jet baghouse;
- 5-bin aggregate feed system;
- Feed conveyor;
- Four hot bin batch tower;
- Cyclone;
- Lime silo;
- Hot Storage silo;
- Hot asphalt cement storage tank;
- Hot oil heater (25,000 gallon);
- Burner;
- Drag slat elevator; and
- Associated equipment.

II. Source Description

A typical operation begins by loading the aggregate and recycled asphalt product into hoppers. Material is transported via an incline conveyor, through a scalping screen, up to the weigh conveyor, and into the rotary drum dryer/mixer. The material is completely dried and conveyed to the pugmill where it is mixed with hot asphalt oil and lime. A horizontal cyclone and horizontal baghouse are used to control particulate emissions from the asphalt plant drum and lime silo. The asphalt mixture is then loaded into haul trucks from the pugmill and taken to the project site.

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 (FCAA), 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 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. 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.

IV. Emission Inventory

	Lbs/Day					
Source	**PM**	**PM_{10}**	**NO_x**	**VOC**	**CO**	**SO_x**
Drum Mix Asphalt Plant Dryer	76.66	44.08	70.40	166.40	40.96	74.24
Drum Mix Plant Load-Out	0.67	0.44	0.00	1.73	5.32	0.00
Asphalt Product Silo Filing	0.76	0.32	0.00	1.51	15.60	0.00
Cold Aggregate Screens and Storage Bins	27.65	16.90	0.00	0.00	0.00	0.00
Cold Aggregate Handling/Conveyors	0.01	8.45	0.00	0.00	0.00	0.00
Cold Aggregate Storage Piles	12.71	6.03	0.00	0.00	0.00	0.00
Haul Roads/Vehicle Traffic	22.20	5.65	0.00	0.00	0.00	0.00
TOTAL	**140.65**	**81.86**	**70.40**	**169.64**	**61.89**	**74.24**

Note: For operation during the winter season (October 1-March 31). A complete emission inventory is on file with the Department.

	Lbs/Day					
Source	**PM**	**PM_{10}**	**NO_x**	**VOC**	**CO**	**SO_x**
Drum Mix Asphalt Plant Dryer	287.49	165.30	264.00	624.00	153.60	278.40
Drum Mix Plant Load-Out	2.50	1.63	0.00	6.48	19.97	0.00
Asphalt Product Silo Filing	2.83	1.20	0.00	5.66	58.51	0.00
Cold Aggregate Screens and Storage Bins	103.68	63.36	0.00	0.00	0.00	0.00
Cold Aggregate Handling/Conveyors	0.04	31.68	0.00	0.00	0.00	0.00
Cold Aggregate Storage Piles	47.66	22.61	0.00	0.00	0.00	0.00
Haul Roads/Vehicle Traffic	22.20	5.65	0.00	0.00	0.00	0.00
TOTAL	**466.40**	**291.43**	**264.00**	**636.14**	**232.08**	**278.40**

Note: For operation during the summer season (April 1-September 30). A complete emission 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 particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}). Due to exceedances of the national standards for PM_{10}, 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 PM_{10}. As a result of this designation, the EPA required the Department and the City-County Health Departments to submit PM_{10} State Implementation Plans (SIP). The SIPs consisted of emission control plans that controlled fugitive dust emissions from roads, parking lots, construction, and demolition, since technical studies identified these sources to be the major contributors to PM_{10} emissions.

Permit #4254-00 and **Addendum 1** are for a portable asphalt plant that will locate at sites in or within 10 kilometers (km) of certain PM_{10} nonattainment areas. The more stringent operating conditions contained in the addendum will minimize any potential impact on the nonattainment areas and will protect the national ambient air quality standards. 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

Permit #4254-00 and Addendum 1 will cover the operations of this portable asphalt plant while operating at any location within Montana, excluding those counties that have a Department approved permitting program and those areas that are tribal lands.

Addendum 1 will cover the operations of this portable asphalt plant, while operating in or within 10 km of the Kalispell PM_{10} nonattainment area (specific site during the winter months (October 1 through March 31). Additionally, the facility will also be allowed to operate in or within 10 km of PM_{10} nonattainment areas during the summer months (April 1 through September 30).

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 that is included in the attached permit analysis and determined there are no taking or damaging implications.

VIII. Environmental Assessment

The current permit action is an administrative amendment and does not constitute a state action; therefore, an environmental assessment is not required for the proposed project.

Permit Analysis Prepared by: Trista Glazier
Date: October 22, 2008

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

Air Quality Permit number: 4254-00

Preliminary Determination Issued: 11/13/08
Department Decision Issued: 12/17/08
Permit Final: 1/5/09

1. *Legal Description of Site*: Knife River proposes to operate a portable hot mix asphalt plant and associated equipment which will initially be located in Section 14, Township 30 North, Range 21 West, in Flathead County, Montana. However, Permit #4254-00 applies while operating at any location in Montana, except those areas having a Department-approved permitting program, areas considered tribal lands, or areas in or within 10 km of certain PM_{10} nonattainment areas. A Missoula County air quality permit will 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*: Knife River proposes to operate a portable hot mix asphalt plant with a maximum capacity of 200 TPH.

3. *Objectives of Project*: The objective of construction and operation of the asphalt plant at its initial location is to provide material for support of construction projects in the area.

4. *Alternatives Considered*: In addition to the proposed action, the Department also considered the "no-action" alternative. The "no-action" alternative would deny issuance of the air quality preconstruction permit to the proposed facility. However, the Department does not consider the "no-action" alternative to be appropriate because Knife River has 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 list of enforceable conditions, including a BACT analysis, would be included in Permit #4254-00.

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 that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.

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

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Terrestrial and Aquatic Life and Habitats			X			Yes
B	Water Quality, Quantity, and Distribution			X			Yes
C	Geology and Soil Quality, Stability and Moisture			X			Yes
D	Vegetation Cover, Quantity, and Quality			X			Yes
E	Aesthetics			X			Yes
F	Air Quality			X			Yes
G	Unique Endangered, Fragile, or Limited Environmental 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

Terrestrials would use the areas where the asphalt plant production would occur. Further, the project would result in emissions, which could affect any terrestrial and aquatic resources using the proposed project area. However, because the operations are temporary, seasonal, and relatively small by industrial standards, the operations alone would result in only minor impacts to the terrestrial and aquatic life of any given area.

B. Water Quality, Quantity and Distribution

Emissions from the proposed project could potentially affect existing resources of water in any proposed project area. However, as described in Section III of the permit analysis, the source would be required to apply BACT to emissions sources to minimize any potential emissions and thus minimize any potential impact to area water resources. Further, because the facility would be a temporary, seasonal, and a relatively small industrial source, any impacts to water resources in the any proposed project area would be minor and short-lived.

In addition, water would be used for dust suppression, but would only cause a minor disturbance to any given area. No surface water or ground water quality problems would be expected as a result of using water for dust suppression. Any accidental spills or leaks from equipment would be required to be handled according to the appropriate environmental regulations. Overall, any impacts to water quality, quantity, and distribution would be minor.

C. Geology and Soil Quality, Stability and Moisture

The proposed asphalt plant would have only minor impacts on soils in any proposed site location because the facility would remain a relatively small industrial operation, would continue to use only relatively small amounts of water for pollution control, and would only have seasonal or intermittent operations. Therefore, there is a low likelihood that assembly and operation of the

plant in any locations that will cause significant additional impacts to geology and soil quality, stability, and moisture given the likelihood of previous industrial disturbance at the given area of operation.

D. Vegetation Cover, Quantity, and Quality

Emissions from the proposed project could potentially affect existing vegetation resources in the proposed project area. However, the operations would initially and typically take place within a previously disturbed timber cut area or industrial location. As described in Section III of the permit analysis, the source would be required to apply BACT to emissions sources to minimize any potential emissions and thus minimize any potential impact to vegetation resources in the area. Further, because the facility would be a temporary, seasonal, and a relatively small industrial source, any impacts to vegetation resources in any given proposed project area would be minor and short-lived.

E. Aesthetics

The operations would be visible and would create additional noise in any given area of operation. Permit #4254-00 would include conditions to control emissions (including visible emissions) from the plant. In addition, the operations would initially and typically take place within a previously disturbed timber cut site or industrial location. Because the site is typically used for industrial purposes such as that proposed for the current permit action, the proposed operations would be typical and would have only a minor impact on the proposed project area. Further, given that the proposed project would be a temporary, seasonal, and a relatively small industrial operation any impact would be minor and short-lived.

F. Air Quality

The air quality impacts from the asphalt plant would be minor because Permit #4254-00 would include conditions limiting the opacity from the plant, as well as requiring water spray, as necessary, and other means to control air pollution. Furthermore, Permit #4254-00 would limit total emissions from the proposed equipment, and any additional equipment owned and operated by NIC, to 250 tons/year or less at any given operating site, excluding fugitive emissions.

G. Unique Endangered, Fragile, or Limited Environmental Resources

To assess potential impacts to unique endangered, fragile, or limited environmental resources in the proposed area of operations, the Department contacted the Montana Natural Heritage Program (MNHP) to identify any species of concern associated with the initial proposed site location (Section 14, Township 30 North, and Range 21 West, in Flathead County, Montana). Search results concluded there are thirteen species of special concern. The defined area, in this case, is defined by the township and range of the proposed site, with an additional one-mile buffer.

Terrestrial animal species of special concern inhabiting the area surrounding the proposed project site includes the *Canis Lupis* (Gray Wolf). Aquatic animal species of special concern inhabiting the area surrounding the proposed project site includes the *Salvelinus confluentus* (Bull Trout). Nonvascular plant species of concern in the area includes *Aloina brevirostris*, *Amblyodon dealbatus*, and *Bryum calobryoides*. Vascular plant species of concern include *Cirsium brevistylum* (Short-styled Thistle), *Silene spaldingii* (Spalding's Campion), *Lathyrus bijugatus* (Latah Tule Pea), *Castilleja cervina* (Deer Indian Paintbrush), *Cyperus erythrorhizos* (Red-root Flatsedge), *Eriophorum gracile* (Slender Cottongrass), *Cypripedium parviflorum* (Small Yellow Lady's-slipper), and *Asplenium trichomanes* (Maidenhair Spleenwort).

The species of special concern that have been identified as being within the defined area have been generalized from many miles of potential habitat. The current permit action would result in the emission of air pollutants, which could result in minor impacts to existing unique endangered, fragile, or limited environmental resource in any given area of operation. However, given the temporary, seasonal, and relatively small industrial size of the operation, any impact would be minor and short-lived. In addition, initial and typical operations would take place within a previously disturbed industrial location further limiting the potential for impact to any unique endangered, fragile, or limited environmental resource in any proposed location of operation.

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

The proposed project would impact the demands on the environmental resources of water, air, and energy because the project would be a source of air pollution and require energy for operation. While deposition of pollutants may impact water and air resources, as explained in Sections 7.B and 7.F of this EA, respectively, the Department determined that the impacts of the proposed project on air and water resources would be minor due to the dispersion of pollutants and emissions control conditions that would be placed in Permit #4254-00. Furthermore, only small quantities of water would be required for dust suppression of emissions being generated at the site.

The proposed project would have minor impacts on the demand on energy resources because the facility would be powered by an industrial diesel engine that would use small amounts of fuel. Overall, the facility is a temporary, seasonal, and relatively small industrial source, so any demands for environmental resources of water, air, and energy would be minor and short-lived.

I. Historical and Archaeological Sites

To identify historical and archaeological sites near the proposed project area, the Department contacted the Montana Historical Society, State Historic Preservation Office (SHPO). According to SHPO records, there have not been any previously recorded historic or archaeological sites within the proposed area. In addition, SHPO records indicated that no previous cultural resource inventories have been conducted in the area. SHPO determined that a cultural resource inventory is unwarranted at this time. The Department determined that due to the previous disturbance in the area and the small amount of land disturbance that would be required to construct the facility, the chance of the project impacting any cultural or historic sites would be minor.

J. Cumulative and Secondary Impacts

Overall, this project would result in minor impacts to the physical and biological environment in the immediate area, as discussed in Section 7.A through Section 7.I of this EA. Because all impacts discussed previously are minor or will not occur, the Department determined that any cumulative and secondary impacts associated with the permitted operations would be minor. Air pollution from the facility would be controlled by Department-determined BACT and conditions in Permit #4254-00. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as outlined in Permit #4254-00.

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

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

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

A. Social Structures and Mores

The proposed project would not have any effect on social structures and mores of the proposed area of operation. The project is temporary, seasonal, and small by industrial standards and operations would initially and typically take place in an existing agricultural area or industrial location. The predominant use of the surrounding area would not change as a result of the proposed project. Further, the facility would be required to operate according to the conditions that would be placed in Permit #4254-00, which would limit the effects to social structures and mores because air emissions would be limited from compliance with the established permit conditions.

B. Cultural Uniqueness and Diversity

The proposed project would not have any effect on cultural uniqueness and diversity of the proposed area of operation. The project is small by industrial standards and operations would typically take place at an existing industrial area. The predominant use of the surrounding area would not change as a result of the proposed project.

C. Local and State Tax Base and Tax Revenue

The proposed project would have only a minor affect on the local and state tax base and tax revenue. The project is temporary, seasonal, and small by industrial standards, and operations would typically take place in an existing industrial area requiring no new construction. The facility would require the use of only a few employees (between 7 and 10). Therefore, only minor impacts to the local and state tax base and revenue could be expected from company and employee revenues and facility production.

D. Agricultural or Industrial Production

Because the proposed project would initially and typically operate in an existing agricultural area or industrial location, the project would not require any additional industrial construction. Further, no additional industrial production would result from the proposed project. Operations would have little effect upon adjacent lands that could be utilized for farmland and animal grazing and any such effects would be minor and temporary.

E. Human Health

The proposed project would result in the emission of air pollutants. However, Permit #4254-00 would include limits and conditions to ensure that the facility would be operated in compliance with all applicable air quality rules and standards. As detailed in Section 7.F of this EA, Knife River would be required to use BACT and maintain compliance with all ambient air quality standards (including secondary standards). These standards are designed to be protective of human health. Overall, any health impacts resulting from the proposed project would be minor.

F. Access to and Quality of Recreational and Wilderness Activities

The asphalt plant operation would initially and typically operate within areas designated for such operations; therefore, impacts to access to recreational and wilderness areas are expected to be minor or insignificant. Overall potential impacts to access to and quality of recreational and wilderness activities are expected to be minor.

G. Quantity and Distribution of Employment

The proposed project would be relatively small, and would have seasonal and intermittent operations. Knife River would be expected to utilize only a few employees for the project. Therefore, the proposed project would have no significant effects upon the quantity and distribution of employment in this area.

H. Distribution of Population

The proposed operations would not disrupt the normal population distribution in any given area. Knife River would be expected to utilize only a few employees for the project. Because operations are temporary and seasonal, no individuals would be expected to permanently relocate to any area as a result of operating the facility.

I. Demands for Government Services

Government services would be required for acquiring the appropriate permits from government agencies. In addition, the permitted source of emissions would be subject to periodic inspections by government personnel. Therefore, any demands for government services would be minor.

J. Industrial and Commercial Activity

The proposed project would not impact local industrial and commercial activity because the proposed project would initially and typically operate in an existing timber cut area or industrial location and would not require any additional industrial construction or result in any additional industrial production.

K. Locally Adopted Environmental Plans and Goals

Knife River would be allowed, by Permit #4254-00, to operate in areas designated by the EPA as attainment or unclassified for ambient air quality. Addendum 1 applies when Knife River operates in or within 10 km of certain PM_{10} nonattainment areas. Permit #4254-00 would contain limits for protecting air quality and for ensuring facility emissions are in compliance with any applicable ambient air quality standards. Because the facility would be a small and portable source and would have intermittent and seasonal operations, any impacts from the facility would be minor and short-lived. The Department is unaware of any local environmental plans or goals. Permit #4254-00 would be protective of the local areas.

L. Cumulative and Secondary Impacts

Overall, cumulative and secondary impacts from this project would result in minor impacts to the economic and social environment in the immediate area as discussed in Section 8.A through Section 8.K of this EA. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as would be outlined in Permit #4254-00.

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 construction and operation of hot mix asphalt plant. Permit #4254-00 includes 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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