Montana Department of
ENVIRONMENTAL QUALITY
Brian Schweitzer, Governor
P. O. Box 200901 Helena, MT 59620-0901 (406) 444-2544 Website: www.deq.mt.gov

July 31, 2008

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

Dear Ms. Flikkema:

Air Quality Permit #3142-02 is deemed final as of July 31, 2008, 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) 444-3490

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 #3142-02

Knife River Corporation
PO Box 9
Belgrade, MT 59714

July 31, 2008

AIR QUALITY PERMIT

Issued To: Knife River Corporation
P.O. Box 790
Missoula, MT 59806

Permit #3142-02
Administrative Amendment (AA) Request Received: 1/24/08
Department Decision on AA Issued: 7/15/08
Final Permit: 7/31/08
AFS #777-3142

An air quality permit, with conditions, 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) 17.8.740, *et seq.*, as amended, for the following:

Section I: Permitted Facilities

A. Plant Location

Knife River operates a portable drum mix asphalt plant with attached horizontal cyclone, horizontal baghouse, and associated equipment at various locations throughout Montana. Permit #3142-02 applies while operating at any location in Montana, except within those areas having a Department of Environmental Quality (Department)-approved permitting program, those areas considered tribal lands, or those 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.* An addendum to this air quality permit will be required for locations in or within 10 km of certain PM_{10} nonattainment areas. A complete list of the permitted equipment is contained in Section I.A of the permit analysis.

B. Current Permit Action

On January 24, 2008, the Department received a letter from Knife River requesting the name on Permit #3142-01 be changed from JTL Group, Inc. to Knife River. The current permit action updates the permit to reflect the name change as well as updates the permit to current permit emission inventory and format.

Section II: Conditions and Limitations

A. Emission Limitations

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

2. Knife River shall not cause or authorize to be discharged into the atmosphere from the asphalt plant stack any visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304 and 40 CFR 60, Subpart I).

3. Knife River shall not cause or authorize to be discharged into the atmosphere from 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, any visible emissions that exhibit 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. Knife River shall not cause or authorize to be discharged into the atmosphere from any street, road, or parking lot any visible fugitive emissions that exhibit an opacity of 20% or greater (ARM 17.8.308 and ARM 17.8.752).

5. Knife River shall treat all unpaved portions of the haul roads, access roads, parking lots, or the general plant area with water and/or chemical dust suppressant, as necessary, to maintain compliance with the reasonable precautions limitation in Section II.A.4 (ARM 17.8.752).

6. A baghouse for air pollution control, with a device to measure the pressure drop (magnehelic gauge, manometer, etc.), must be installed and maintained on the asphalt drum and lime silo. Pressure drop must be measured in inches of water. Temperature indicators at the control device inlet and outlet must be installed and maintained. Pressure drop on the control device and temperature must be recorded daily and kept on site according to Section II.C.2 (ARM 17.8.752).

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

8. Asphalt plant production shall not exceed 1,305,000 tons during any rolling 12-month time period (ARM 17.8.749 and ARM 17.8.1204).

9. The hours of operation for each of the diesel generators/engines shall not exceed 2,900 hours during any rolling 12-month time period (ARM 17.8.749 and ARM 17.8.1204).

10. The two diesel generators/engines used with this facility shall not have a combined capacity greater than 1240 horsepower (hp) (ARM 17.8.749).

11. Knife River shall only use natural gas or No. 2 fuel oil to fire the drum dryer (ARM 17.8.749).

12. If the permitted equipment is used in conjunction with any other equipment owned or operated by Knife River, at the same site, production shall be limited to correspond with an emission level that does not exceed 250 tons during any rolling 12-month time period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).

13. Knife River shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 Code of Federal Regulations (CFR) 60, Subpart I, as it applies to this asphalt operation (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 Environmental Protection Agency (EPA) Methods 1-5 and 9 source test shall be performed on the asphalt plant to demonstrate compliance with Section II.A.1, Section II.A.2, and Section II.A.3, respectively. Testing shall continue on an every 4-year basis or according to

another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and ARM 17.8.749).

2. The pressure drop and temperature on the air pollution control device must be recorded daily and kept on site according to Section II.C.2 (ARM 17.8.749).

3. Pressure drop and temperature on the air pollution control device must be recorded during the test and reported as part of the test results (ARM 17.8.749).

4. All compliance source tests must be conducted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

5. Although asphalt production will be limited to the average production rate during the compliance source test, it is suggested the test be performed at the highest production rate practical (ARM 17.8.749).

6. Knife River may retest at any time in order to test at a higher production rate (ARM 17.8.749).

7. 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. In addition, a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area where the transfer is to be made, at least 15 days prior to the move. The Intent to Transfer Form and the proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department upon request (ARM 17.8.765).

2. Knife River shall maintain on-site records showing daily hours of operation, daily production rates, and daily 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 submitted to the Department upon request, and must be available for inspection by the Department (ARM 17.8.749).

3. Knife River shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in Section I.A of the permit analysis.

   Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in 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).

4. Knife River shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745, that would include ***the addition of a new emission unit***, a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit. This notice must be submitted to the Department, in writing, 10 days prior to start up or use of the proposed de

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

5. Knife River shall document, by month, the production from the asphalt plant. By the 25th day of each month, Knife River shall calculate the daily production of asphalt 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 emissions inventory (ARM 17.8.749).

6. Knife River shall document, by month, the combined hours of operation of the diesel generator/engines. By the 25th day of each month, Knife River shall calculate the total of the combined hours of operation of the diesel generator/engine for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.9. The information for each of the previous months shall be submitted along with the annual emissions inventory (ARM 17.8.749).

7. Knife River shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality 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 with the annual emissions inventory information (ARM 17.8.1204).

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 # 3142-02

I. Introduction/Process Description

A. Permitted Equipment

Knife River Corporation (Knife River) operates a portable 1996 Astec batch mix asphalt plant (maximum capacity 450 tons per hour (TPH)) with an attached horizontal cyclone, horizontal baghouse, and associated equipment. The facility will be powered by two diesel generators (with a combined engine capacity of up to 1240 horsepower (hp)).

B. Process 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.

C. Permit History

On April 6, 2001, JTL Group, Inc. (JTL) was issued **Permit #3142-00** for the operation of a portable 1996 Astec drum mix asphalt plant (maximum capacity 450 TPH) with an attached horizontal cyclone, horizontal baghouse, and associated equipment. The facility was powered by a diesel generator (up to 820 kilowatts (kW)).

On September 1, 2004, JTL submitted a complete permit application and requested to add a diesel engine/generator (up to 320 kW) to Permit #3142-00. **Permit #3142-01** replaced Permit #3142-00.

D. Current Permit Action

On January 24, 2008, the Department of Environmental Quality (Department) received a letter from Knife River requesting the name on Permit #3142-01 be changed from JTL to Knife River. The current permit action updates the permit to reflect the name change as well as updates the permit emission inventory and format. **Permit #3142-02** replaces Permit #3142-01.

E. Additional Information

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

II. Applicable Rules and Regulations

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

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

1. ARM 17.8.101 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.

3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source, or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq*., Montana Code Annotated (MCA).

   Knife River shall comply with all requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.

5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in 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 that a public nuisance is created.

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

1. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
2. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
3. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
4. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
5. ARM 17.8.223 Ambient Air Quality Standard for PM_{10}

Knife River must comply with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 - Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.

2. ARM 17.8.308 Particulate Matter, 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, allow, or permit 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 Processes. This rule requires that no person shall cause or allow to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.

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 rule.

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.

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

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that Knife River submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. Knife River was not required to submit a permit application fee because the current permit action is administrative.

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

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions which pro-rate the required fee amount.

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

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a facility to obtain an air quality permit or permit alteration to construct, modify, 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 total particulate matter (PM), particulate matter with a diameter of 10 microns or less (PM_{10}), oxides of nitrogen (NO_x), and carbon monoxide (CO), and oxides of sulfur (SO_x); therefore, an air quality permit is required.

3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit Program.

4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.

5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. Knife River was not required to submit a permit application because the current permit action is administrative. (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 was not required to submit an affidavit of publication of public notice because the current permit action is administrative.

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 IV 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 Knife River, 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 Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification with respect to each pollutant subject to regulation under the Federal Clean Air Act (FCAA) that it would emit, except as this subchapter would otherwise allow.

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

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 #3142-02 for Knife River, the following conclusions were made:

a. The facility's PTE is less than 100 tons/year for all criteria pollutants.

b. The facility's PTE is less than 10 tons/year of any one HAP and less than 25 tons/year of all HAPs.

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

d. This source is not located in a serious PM_{10} nonattainment area.

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.

Knife River is not subject to Title V Operating Permit requirements because the facility has requested federally enforceable limits to reduce their potential emissions below the Title V 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 source 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.

The Department has determined that the annual reporting requirements contained in the permit are sufficient to satisfy this requirement.

3. ARM 17.8.1207 Certification of Truth, Accuracy, and Completeness. The compliance certification submittal required 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. Emission Inventory

Source	Tons/year (TPY)					
	PM	PM_{10}	NO_x	CO	VOC	SO_x
Asphalt Plant Dryer	24.25	13.94	35.89	84.83	20.88	37.85
Asphalt Plant Loadout	0.34	0.22	0.00	0.88	2.71	0.00
Asphalt Product Silo Filling	0.38	0.16	0.00	0.77	7.95	0.00
Cold Aggregate Screens and Storage	14.09	8.61	0.00	0.00	0.00	0.00
Cold Aggregate Handling/Conveyors	11.75	4.31	0.00	0.00	0.00	0.00
Cold aggregate Storage Piles	6.48	3.07	0.00	0.00	0.00	0.00
Diesel-Engine Generators (combined capacity up to 1240 hp)	3.96	3.96	55.74	12.01	4.44	3.69
Haul Roads/Vehicle Traffic	4.05	1.03	0.00	0.00	0.00	0.00
Total	**65.30**	**35.31**	**91.63**	**98.49**	**35.99**	**41.53**

ASPHALT PLANT DRYER

Operating Parameters:

Operating Hours:	2900 hr/yr (Permit Limit)
Plant Elevation:	4000 ft. (Application information)
Actual Pressure:	25.92 in. Hg
Standard Pressure:	29.92 in. Hg
Flowrate:	65,000 acfm (Company Information)
Std. Temp:	25 °C = 77 °F = 537 °R
Stack Temp.	149 °C = 300 °F = 760°R (Application Information)
Correction Equation:	V1 = V2 (P2/P1) (T1/T2) (1-MC)
Corrected Flowrate	65000 acfm * (25.9 in. Hg/29.92 in. Hg) * (537 R / 760 R)*(1-0.15) = 48772 dscfm
Process Rate:	450 ton/hr (Company Information)

PM Emissions
Emission Factor: 0.04 gr/dscf (BACT Determination)
Calculations: 0.04 gr/dscf * 48772 dscfm * 1 lb/7000 gr * 60 m/hr = 16.72 lb/hr
16.72 lb/hr * 2900 hr/yr * 0.0005 ton/lb = 24.25 ton/yr

PM_{10} 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 * 450 ton/hr = 9.62 lb/hr
9.62 lb/hr * 2900 hr/yr * 0.0005 ton/lb = 13.94 ton/yr

NO_x Emissions
Emission Factor: 0.055 lb/ton (AP-42, Section 11.1, 11.1-3, Drum Mix, worst-case fuel excluding coal, 3/04)
Calculations: 0.055 lb/ton * 450 ton/hr = 24.75 lb/hr
24.75 lb/hr * 2900 hr/yr * 0.0005 ton/lb = 35.89 ton/yr

CO Emissions
Emission Factor: 0.13 lb/ton (AP-42, Section 11.1, Table 11.1-3, Drum Mix, worst-case fuel excluding coal, 3/04)
Calculations: 0.13 lb/ton * 450 ton/hr =58.50 lb/hr
58.50 lb/hr * 2900 hr/yr * 0.0005 ton/lb = 84.83 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 * 450 ton/hr = 14.40 lb/hr
14.40 lb/hr * 2900 hr/yr * 0.0005 ton/lb = 20.88 ton/yr

SO_2 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 *450 ton/hr = 26.10 lb/hr
26.10 lb/hr * 2900 hr/yr * 0.0005 ton/lb = 37.85 ton/yr

DRUM-MIX PLANT LOAD-OUT

Operating Parameters:

Process Rate: 450 ton/hr (Applicant Information)
Hours of Operation: 2900 hr/yr

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 *450 ton/hr * 2900 hr/yr * 0.0005 ton/lb = 0.34 ton/yr

PM_{10} Emissions
Emission Factor: 0.00034lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04)
Calculations: 0.00034 lb/ton * 450 ton/hr * 2900 hr/yr * 0.0005 ton/lb = 0.22 ton/yr

CO Emissions
Emission Factor: 0.00135 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04)
Calculations: 0.00135 lb/ton * 450 ton/hr * 2900 hr/yr * 0.0005 ton/lb = 0.88 ton/yr

VOC Emissions (VOC = TOC)
Emission Factor: 0.00416 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04)
Calculations: 0.00416 lb/ton * 450 ton/hr * 2900 hr/yr * 0.0005 ton/lb = 2.71 ton/yr

ASPHALT PRODUCT SILO FILLING

Operating Parameters:

Process Rate: 450 ton/hr (Application Information)
Hours of Operation: 2900 hr/yr

PM Emissions
Emission Factor: 0.00059 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04)
Calculations: 0.00059 lb/ton * 450 ton/hr * 2900 hr/yr * 0.0005 ton/lb = 0.38 ton/yr

PM_{10} Emissions
Emission Factor: 0.00025lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04)
Calculations: 0.00025 lb/ton * 450 ton/hr * 2900 hr/yr * 0.0005 ton/lb = 0.16 ton/yr

CO Emissions
Emission Factor: 0.00118 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04)
Calculations: 0.00118 lb/ton * 450 ton/hr * 2900 hr/yr * 0.0005 ton/lb = 0.77 ton/yr

VOC Emissions (VOC = TOC)
Emission Factor: 0.01219 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04)
Calculations: 0.01219 lb/ton * 450 ton/hr * 2900 hr/yr * 0.0005 ton/lb = 7.95 ton/yr

COLD AGGREGATE SCREENS AND STORAGE BINS

Operating Parameters:

Process Rate: 450 ton/hr (Application Information)
Number of Transfers: 6 Transfers (Assumed)
Hours of operation: 2900 hr/yr

PM Emissions
Emission Factor: 0.0036 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, 8/04)
Calculations: 0.0036 lb/ton * 450 ton/hr * 2900 hr/yr * 0.0005 ton/lb * 6 Transfers = 14.09 ton/yr

PM_{10} Emissions
Emission Factor: 0.0022 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, 8/04)
Calculations: 0.0022 lb/ton * 450 ton/hr * 2900 hr/yr * 0.0005 ton/lb * 6 Transfers = 8.61 ton/yr

COLD AGGREGATE HANDLING/CONVEYORS

Operating Parameters:

Process Rate: 450 ton/hr (Application Information)
Number of Transfers: 6 Transfers (Assumed)
Hours of operation: 2900 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 * 450 ton/hr * 2900 hr/yr * 0.0005 ton/lb * 6 Transfers = 11.75 ton/yr

PM_{10} 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 * 450 ton/hr * 2900 hr/yr * 0.0005 ton/lb * 6 Transfers = 4.31 ton/yr

COLD AGGREGATE STORAGE PILES

Operating Parameters:

Process Rate: 450 ton/hr (Application Information)
Number of Transfers: 3 Piles (Assumed)
Hours of operation: 2900 hr/yr

PM Emissions
Emission Factor: 0.00331 lb/ton (AP-42, Section 13.2.4, Table 13.2.4.3)
Calculations: 0.00331 lb/ton * 210 ton/hr * 8760 hr/yr * 0.0005 ton/lb * 3 Piles = 6.48 ton/yr

PM_{10} Emissions
Emission Factor: 0.00157 lb/ton (AP-42, Section 13.2.4, Table 13.2.4.3)
Calculations: 0.00157 lb/ton * 100 ton/hr * 8760 hr/yr * 0.0005 ton/lb * 3 Piles = 3.07 ton/yr

DIESEL ENGINE GENERATORS (COMBINED TOTAL UP TO 1240 HP)

Engine Size 1240.0 hp
Hours of Operation: 2900 hr/yr

PM Emissions
Emission Factor: 0.0022 lb/hp-hr (AP-42 Table 3.3-1, 7/95)
Calculations: 0.0022 lb/hp-hr * 1240 hp * 2900 hr/yr * 0.0005 ton/lb = 3.96 ton/yr

PM-10 Emissions
Emission Factor 0.0022 lb/hp-hr (AP-42 Table 3.3-1, 10/96)
Calculations: 0.0022 lb/hp-hr * 1240 hp * 2900 hr/yr * 0.0005 ton/lb = 3.96 ton/yr

NO_x Emissions
Emission Factor 0.0310 lb/hp-hr (AP-42 Table 3.3-1, 10/96)
Calculations: 0.031 lb/hp-hr * 1240 hp * 2900 hr/yr * 0.0005 ton/lb = 55.74 ton/yr

CO Emissions
Emission Factor 0.00668 lb/hp-hr (AP-42 Table 3.3-1, 10/96)
Calculations: 0.00668 lb/hp-hr * 1240 hp * 2900 hr/yr * 0.0005 ton/lb = 12.01 ton/yr

VOC Emissions
Emission Factor 0.00247 lb/hp-hr (AP-42 Table 3.3-1, 10/96)
Calculations: 0.00247 lb/hp-hr * 1240 hp * 2900 hr/yr * 0.0005 ton/lb = 4.44 ton/yr

SO_x Emissions
Emission Factor 0.00205 lb/hp-hr (AP-42 Table 3.3-1, 10/96)
Calculations: 0.00205 lb/hp-hr * 1240 hp * 2900 hr/yr * 0.0005 ton/lb = 3.69 ton/yr

HAUL ROADS/VEHICLE TRAFFIC

Operating Parameters:

Vehicle miles traveled: 5 VMT/day (Application Information)
Days Per Year: 365 days/year

PM Emissions
Emission Factor: 4.44 lb/VMT (AP-42, Section 13.2.2, Controlled Emissions, 11/06)
Calculation: 4.44 lb/VMT * 5 VMT/day * 365 days/year * 0.0005 ton/lb = 4.05 ton/yr

PM_{10} Emissions
Emission Factor: 1.13 lb/VMT (AP-42, Section 13.2.2, Controlled Emissions, 11/06)

Calculation: 1.13 lb/VMT * 5 VMT/day * 365 days/year * 0.0005 ton/lb = 1.03 ton/yr

IV. Best Available Control Technology

A BACT determination is required for each new or altered source. Knife River shall install on the new or altered source the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized.

A BACT determination was not required for the current permit action because the permit change is considered an administrative permit change.

V. Existing Air Quality Impacts

This permit is for a portable drum mix asphalt plant to locate in various locations throughout the state of Montana. In the view of the Department, the amount of controlled particulate emissions generated by this project will not cause concentrations of pollutants in the ambient air that will exceed any set standard.

VI. Taking or Damaging Implication Analysis

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

YES	NO	
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.

VII. Environmental Assessment

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

Analysis Prepared By: Trista Glazier
Date: 6/19/08