DEQ
Montana Department
of Environmental Quality

May 27, 2015

Ron Klinker
Knife River North Central
5454 134th Ave. NW
Williston, ND 58801

Dear Mr. Klinker:

Montana Air Quality Permit #5120-00 is deemed final as of May 27, 2015, by the Department of Environmental Quality (Department). This permit is for a portable 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,

Julie A. Merkel
Air Permitting Supervisor
Air Quality Bureau
(406) 444-3626

Rhonda Payne
Environmental Science Specialist
Air Quality Bureau
(406) 444-5287

JM:RP
Enclosure

Montana Department of Environmental Quality
Permitting and Compliance Division

Montana Air Quality Permit #5120-00

Knife River North Central
5454 134th Ave. NW
Williston, ND 58801

May 27, 2015

MONTANA AIR QUALITY PERMIT

Issued To: Knife River North Central
5454 134th Ave. NW
Williston, ND 58801

MAQP: #5120-00
Application Complete: 3/11/15
Preliminary Determination Issued: 3/20/15
Department's Decision Issued: 5/11/15
Permit Final: 5/27/15
AFS #777-5120:

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Knife River North Central (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 install and operate a portable parallel-flow drum mix-asphalt plant and associated equipment with a 604 ton per hour (TPH) maximum production capacity. A complete list of permitted equipment is contained in Section I.A of the permit analysis.

B. Plant Location

Knife River operates a portable asphalt plant, which will initially be located at Township 24N, Range 59E, Section 13 in Richland County, Montana. However, MAQP 5120-00 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.* An addendum will be required for locations in or within 10 km of certain PM_{10} nonattainment areas.

SECTION II: Conditions and Limitations

A. Emission Limitations

1. Knife River shall install, operate, and maintain a baghouse for control of particulate matter from the asphalt drum mix drier exhaust stack. A device to measure the pressure drop (magnehelic gauge, manometer, etc.) on the control device (baghouse) must be installed and maintained. 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).

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

3. Knife River shall not cause or authorize to be discharged into the atmosphere from the asphalt plant stack emissions that exhibit 20% opacity or greater averaged over 6 consecutive minutes (ARM 17.8.304; ARM 17.8.340 and 40 CFR 60, Subpart I).

4. 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 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 17.8.308).

5. Knife River shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).

6. Knife River shall treat all unpaved portions of the haul roads, access roads, and 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).

7. Knife River shall be limited to a maximum of 1,328,800 tons of asphalt production during any rolling 12-month period (ARM 17.8.1204).

8. Operation of the hot-mix asphalt plant, including associated nonroad diesel engine(s), shall not exceed 2,200 hours during any rolling 12-month time period (ARM 17.8.1204).

9. The asphalt hot-mix drum dryer is authorized to fire recycled waste oil, No. 5 fuel oil, or propane as fuel (ARM 17.8.749).

10. Knife River shall only use diesel, propane, or natural gas as fuel to fire the asphalt oil heater (ARM 17.8.749 and ARM 17.8.749).

11. The asphalt production rate shall be limited to the average production rate during the last source test demonstrating compliance (ARM 17.8.749).

12. Knife River may have on site and operate one or more diesel-fired nonroad engines, including generator sets, where the combined maximum rated design capacity of these engine(s) shall not exceed 980 horsepower (hp) (ARM 17.8.1204);

13. Knife River shall comply with all applicable standards and limitations, and the reporting, recordkeeping, testing, 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).

14. Knife River shall comply with all applicable standards and limitations, and the reporting, recordkeeping, testing, and notification requirements contained in 40 CFR 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* and 40 CFR 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, for any applicable diesel engine (ARM 17.8.340; 40 CFR 60, Subpart IIII; ARM 17.8.342 and 40 CFR 63, Subpart ZZZZ).

15. 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 of emissions during any rolling 12-month time period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).

B. Testing Requirements

1. Within 60 days after achieving maximum production, but no later than 180 days after initial start-up, an Environmental Protection Agency (EPA) Methods 1-5 particulate matter source test shall be performed on the asphalt drum mix dryer exhaust stack to demonstrate compliance with Section II.A.2. An EPA Method 9 opacity test shall be performed in conjunction with all particulate tests to demonstrate compliance with the condition specified in Section II.A.3. 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, ARM 17.8.340, ARM 17.8.749, and 40 CFR 60 Subpart I).

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

3. Temperature and pressure across the drier baghouse must be recorded daily and kept on site according to Section II.C.4 (ARM 17.8.749).

4. Temperature and pressure drop across the baghouse must be recorded during the compliance source test and reported as part of the test results (ARM 17.8.749).

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

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

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

C. Operational Reporting Requirements

1. If this 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. The facility shall not operate in the new location for more than one year (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, 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 hours of operation, production rates, and baghouse temperature and pressure differential 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, total asphalt production from the asphalt plant. By the 25th day of each month, Knife River shall total the asphalt production for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.7. 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 document, by month, the hours of operation of the asphalt plant and the generator set(s). By the 25th day of each month, Knife River shall total the hours of operation for each equipment for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitations in Sections II.A.8 and II.A.12. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

7. Knife River shall annually certify that its emissions are less than those that would require the facility 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 along with the annual emissions inventory information (ARM 17.8.749 and ARM 17.8.1204).

D. Notification

1. Within 30 days of commencement of construction of any New Source Performance Standard (NSPS)-affected equipment, Knife River shall notify the Department of the date of commencement of construction of the affected equipment (ARM 17.8.340 and 40 CFR 60, Subpart A and Subpart I).

2. Within 15 days of the actual start-up date of any NSPS-affected equipment, Knife River shall submit written notification to the Department of the initial start-up date of the affected equipment (ARM 17.8.340 and 40 CFR 60, Subpart A and Subpart I).

3. Within 15 days of the actual start-up date of any non-NSPS-affected equipment, Knife River shall submit written notification to the Department of the initial start-up 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 (continuous emissions monitoring system (CEMS) or continuous emissions rate monitoring system (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 action 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 therefor, 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 the Department at the location of the permitted source.

G. Air Quality Operation Fees – Pursuant to Section 75-2-220, MCA, 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. Duration of Permit – Construction or installation must begin or contractual obligations entered into that would constitute substantial loss within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (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.

Montana Air Quality Permit (MAQP) Analysis
Knife River North Central
MAQP #5120-00

I. Introduction/Process Description

Knife River North Central proposes to install and operate a portable parallel-flow rotary drum hot-mix asphalt plant with a maximum rated design capacity of 604 tons per hour (tph) of asphalt production.

A. Permitted Equipment

The following list of permitted equipment is provided for reference, as MAQP #5120-00 is written de minimis friendly whereby operational flexibility is provided so that alternate equipment may be utilized as long as maximum permitted capacities are not exceeded. See Section II of the MAQP for specific equipment limitations and/or conditions. Equipment permitted under this action includes, but is not limited to the following:

- 2006 Custom Welding parallel-flow rotary drum dryer mix asphalt plant with baghouse control
- CEI Enterprises dryer burner – 2.1 million British Thermal Units per hour (MMBtu/hr) dryer
- 2004 Caterpillar 3412 980 horse power (hp) diesel-fired engine/generator set
- Aggregate handling/stockpiles
- Silo loading operations/hot mix asphalt storage
- Truck loadout

B. Source Description

For a typical operational set-up, aggregate materials are taken from the on-site aggregate stockpiles and dumped via a front end loader and dumped into the cold aggregate feed bins. The cold aggregate is then transferred from the cold aggregate feed bins via conveyor to the rotary drum. The cold aggregate is dried and heated within the drum mixer. The dryer exhaust vents to the baghouse. A single diesel-fired engine/generator set powers the operation.

After heating and mixing is completed, the asphalt product is transferred from the drum mixer to the asphalt product silo via a conveyor. The asphalt remains in the asphalt silo until it is loaded into trucks for transport to a given job location.

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 locations of complete copies of all applicable rules and regulations 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 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM_{10}
11. ARM 17.8.230 Fluoride in Forage

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 Processes. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter in excess of the amount set forth in this section.

5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this section.

6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank tuck or trailer is equipped with a vapor loss control device as described in (1) of this rule.

7. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). Knife River is considered an NSPS affected facility under 40 CFR Part 60 and is subject to the requirements of the following subparts.

   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 North Central, the asphalt plant equipment to be used under MAQP #5120-00 is subject to this subpart because the facility is a hot mix asphalt facility.

c. 40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE). Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006, and are not fire pump engines, and owners and operators of stationary CI ICE that modify or reconstruct their stationary CI ICE after July 11, 2005, are subject to this subpart. As the permit is written de minimis-friendly, the CI ICE equipment to be used by Knife River under MAQP #5120-00 is potentially subject to this Subpart if it stays in a location for twelve consecutive months. Knife River may substitute compression ignition internal combustion engine(s), therefore applicability to this subpart may apply to engines in the future and shall be dependent upon the date of construction and/or manufacture of the diesel-fired engine utilized.

8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. This rule incorporates, by reference, 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories. Knife River is considered a NESHAP-affected facility under 40 CFR Part 63 and is subject to the requirements of the following subparts.

   a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to a NESHAPs Subpart as listed below.

   b. 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants (HAPs) for Stationary Reciprocating Internal Combustion Engines (RICE). An owner or operator of a stationary reciprocating internal combustion engine (RICE) at a major or area source of HAP emissions is subject to this rule except if the stationary RICE is being tested at a stationary RICE test cell/stand. An area source of HAP emissions is a source that is not a major source. As Knife River is considered an area source of HAP emissions and operates RICE equipment, the engine is potentially subject to this subpart depending upon the location, nature, and duration of operation. Since the RICE to be used under MAQP #5120-00 is intended to be portable, Knife River may not be required to comply with the applicable requirements of 40 CFR 63, Subpart ZZZZ. However, this subpart would become applicable if Knife River constructed and operated a RICE that remains in a location for more than 12 months.

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.

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 modification 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 oxides of nitrogen (NO_X), PM, PM_{10}, CO, SO_2, and volatile organic compounds (VOC); 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 submitted the required permit application for the current permit action. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Knife River submitted an affidavit of publication of public notice for the February 18, 2015 issue of the *Sidney Herald*, a newspaper of general circulation in the Town of Sidney in Richland 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 modified 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 MAQP 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 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 particulate matter with an aerodynamic diameter of 10 microns or less (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 MAQP #5120-00 for Knife River, the following conclusions were made:

   a. The Knife River has requested that federally-enforceable permit operating limits be established to maintain the facility's PTE to less than 100 tpy.

   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 current a NSPS standard (40 CFR 60, Subpart I and potentially Subpart IIII).

   e. This facility is potentially subject to a current NESHAP standard (40 CFR 63, Subpart ZZZZ).

f. This source is not a Title IV affected source

g. This source is not a solid waste combustion unit.

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

Knife River requested federally-enforceable permit limitations to remain a minor source of emissions with respect to Title V. Based on these limitations, the Department determined that this facility is not subject to the Title V Operating Permit Program. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit, Knife River will be required to obtain a Title V Operating Permit.

i. 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 required by ARM 17.8.1204(3)(a) 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 modified source. Knife River shall install on the new or modified source the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized.

A. Asphalt Drum Mixer/Dryer

The Department reviewed relevant control options, as well as previous BACT determinations for the control of particulates generated by the asphalt plant. The following control options were reviewed by the Department in order to make the following BACT determinations:

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

All of the listed technologies are deemed technically feasible for this application. Technical feasible control options, in order the highest control efficiency to the lowest control efficiency base on PM control are as follows:

1. Fabric Filter Baghouse (99 – 99.9% efficient) (EPA Fact Sheet EPA-452/F-03-025, 07/15/03)
2. Electrostatic Precipitator (99 – 99.9% efficient) (EPA Fact Sheet EPA-452/F-03-028, 07/15/03)
3. Cyclone (up to 99% efficient) (EPA Fact Sheet EPA-452/F-03-005, 07/15/03)
4. Wet Scrubber (70 – greater than 99% efficient) (EPA Fact Sheet EPA-452/F-03-0017, 07/15/03)

Knife River has proposed to use a fabric filter baghouse for the control of PM from the exhaust of the asphalt drum mixer. Because Knife River proposes to use a control technology that is equivalent to the highest control efficiency, no further economic analysis is needed. The control option selected has control technology and a control cost comparable to other recently permitted similar sources and is capable of achieving the appropriate emissions standards. Operating and maintaining a baghouse will constitute BACT for the asphalt drum mixer. All asphalt drum mixer emissions are limited to 0.04 grains per dry standard cubic foot (gr/dscf) for particulate and 20 percent opacity in accordance with 40 CFR 60, Subpart I. Knife River shall install and operate a device to measure the pressure drop (magnehelic gauge, manometer, etc.) across the fabric filter system, as well as temperature indicators at the baghouse inlet and outlet.

B. Diesel Engine(s)/Generator set(s)

With the lack of cost effective add-on controls relative to the amount of emissions produced by the diesel-fired engine(s) used in association with MAQP #5120-00, any such add-on controls would be cost prohibitive. Therefore, the Department determined that proper operation and maintenance with no add-on controls would constitute BACT for the diesel-fired engine(s).

In addition, any existing and new diesel-fired engine would likely be required to comply with the federal engine emission limitations including, EPA Tiered emission standards for non-road engines (40 CFR Parts 89 and 1039), New Source Performance Standard emission limitations for stationary compression ignition engines (40 CFR 60, Subpart IIII), or National Emissions Standards for Hazardous Air Pollutant Sources for Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ). Therefore, the Department has determined that compliance with applicable federal standards and proper operation and maintenance of the engines constitutes BACT for these engines.

C. Fugitive Emissions

Knife River must take reasonable precautions to limit the fugitive emissions of airborne particulate matter 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. Using water and/or chemical dust suppressant to comply with the reasonable precautions limitation will be considered BACT.

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

IV. Emission Inventory**

	TPY								
Emission Source	**PM**	**PM_{10}**	**$PM_{2.5}$**	**NO_x**	**CO**	**VOC**	**SO_2**	**CO_2e**	**Total HAPs**
Cold Aggregate Storage Piles	2.84	1.34	0.20	--	--	--	--		
Cold Aggregate Handling/Conveyors	5.98	2.19	0.03	--	--	--	--		
Cold Aggregate Screens	1.46	1.46	0.03	--	--	--	--		
Diesel-Fired Asphalt Oil Heater	--	--		--	0.02	--	--	465.08	
604 TPH Drum Mix Asphalt Plant Dryer	28.01	20.45	16.06	36.54	86.37	21.26	38.54	22093	6.64
Asphalt Product Silo Filling	0.39	0.39	0.39	--	0.78	8.10	--	0.15	
Plant Load-Out	0.35	0.35	0.35	--	0.90	2.60	--	3.77	
Haul Roads / Vehicle Traffic	1.43	0.39	0.04	--	--	--	--		
980 hp Diesel Engine Main Generator	2.37	2.37	2.37	33.42	7.20	2.71	2.21	1240	
Total Emissions	**42.82**	**28.95**	**19.47**	**69.96**	**95.27**	**34.67**	**40.75**	**23801**	**6.64**

Footnotes:

a. Inventory reflects enforceable limits on hours of operation to keep emissions below the Title V threshold of 100 tpy of any pollutant; the allowable emissions remain at or above the attainment area modeling threshold 80 tpy.

** CO = carbon monoxide
HAPs = hazardous air pollutants
hp = horsepower
lb = pound
N/A = not applicable
ND = no data available
NO_X = oxides of nitrogen
PM = particulate matter
PM_{10} = particulate matter with an aerodynamic diameter of 10 microns or less
$PM_{2.5}$ = particulate matter with an aerodynamic diameter of 2.5 microns or less
SO_2 = sulfur dioxide
TPH = tons per hour
TPY = tons per year
VOC = volatile organic compounds
yr = year

Maximum Process Rate:	604	tons/hr
Maximum Hours of Operation:	2200	hrs/yr
Output:	1,328,800	tons
Operating Parameters:		
Plant Elevation:	2150	ft.
Actual Pressure:	27.77	in. Hg
Standard Pressure:	29.92	in. Hg
Actual Flowrate (V2):	70,277	acfm
Standard Temp:	20	C
Assumed Stack Temp.	147	C
Standard Volumetric Flowrate Correction:	V1 = V2 (P2/P1) (T1/T2)	
Standard Volumetric Flowrate:	V1=70277acfm*(27.77 in. Hg/29.92 in. Hg)*(528 R/756 R)	
Standard Volumetric Flowrate (V1):	45,555	scfm
Stack Gas Moisture Content (M):	12	%
Dry Standard Volumetric Flowrate:	=V1*(1 - M/100) = 45,555 scfm * (1 - 12/100)	
Dry Standard Volumetric Flowrate:	40,088	dscfm

Dryer, fabric filter (SCC 3-05-002-05, -55 to -63)

Maximum Process Rate = 604 ton/hr (Application information)	604	ton/hr
Maximum Hours of Operation = 2,200 hrs/yr	2,200	hrs/yr

Filterable PM Emissions:

Based on Emission Limit		
Emission Factor = 0.04 gr/dscf (permit limit)	0.04	gr/dscf
Calculation: (0.04 gr/dscf) * (40,088 dscfm) * (1 lb / 7000 gr) * (60 min/hr) = 13.74 lb/hr	**13.74**	lb/hr
Calculation: (13.74 lb/hr) * (2200 hrs/yr) * (0.0005 ton/lb) = 15.12 ton/yr	**15.12**	ton/yr

Filterable PM_{10} Emissions:

Based on Emission Limit		
Emission Factor = 0.02 gr/dscf (permit limit, assume 50% of TSP is PM10, Department policy)	0.020	gr/dscf
Calculation: (0.02 gr/dscf) * (40,088 dscfm) * (1 lb / 7000 gr) * (60 min/hr) = 6.87 lb/hr	**6.87**	lb/hr
Calculation: (6.87 lb/hr) * (2200 hrs/yr) * (0.0005 ton/lb) = 7.56 ton/yr	**7.56**	ton/yr

Filterable $PM_{2.5}$ Emissions:

Based on Emission Limit		
Emission Factor = 0.0084 gr/dscf (permit limit, assume 21% of TSP is PM2.5, AP 42, Table 11.1-4, 3/04)	0.0084	gr/dscf
Calculation: (0.0084 gr/dscf) * (40,088 dscfm) * (1 lb / 7000 gr) * (60 min/hr) = 2.89 lb/hr	**2.89**	lb/hr
Calculation: (2.89 lb/hr) * (2200 hrs/yr) * (0.0005 ton/lb) = 3.17 ton/yr	**3.17**	ton/yr

CO Emissions:

Emission Factor = 0.13 lb/ton (Waste oil-fired dryer, AP 42, Table 11.1-7, 3/04)	0.13	lb/ton
Control Efficiency = 0%	0	%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (0.13 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 86.37 ton/yr	**86.37**	ton/yr

NOx Emissions:

Emission Factor = 0.055 lb/ton (Waste oil-fired dryer, AP 42, Table 11.1-7, 3/04)	0.055	lb/ton
Control Efficiency = 0%	0	%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (0.055 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 36.54 ton/yr	**36.54**	ton/yr

SO2 Emissions:

Emission Factor = 0.058 lb/ton (Waste oil-fired dryer, AP 42, Table 11.1-7, 3/04)	0.058	lb/ton
Control Efficiency = 0%	0	%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (0.058 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 38.54 ton/yr	**38.54**	ton/yr

TOC Emissions:

Emission Factor = 0.044 lb/ton (Waste oil-fired dryer, AP 42, Table 11.1-8, 3/04)	0.044	lb/ton
Control Efficiency = 0%	0	%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (0.044 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 29.23 ton/yr	**29.23**	ton/yr

CH_4 Emissions:

Emission Factor = 0.012 lb/ton (Waste oil-fired dryer, AP 42, Table 11.1-8, 3/04)	0.012	lb/ton
Control Efficiency = 0%	0	%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (0.012 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 7.97 ton/yr	**7.97**	ton/yr
CO2e = 7.97 * 21 = 167.43 ton/yr	**167.43**	ton/yr

VOC Emissions:

Emission Factor = 0.032 lb/ton (Waste oil-fired dryer, AP 42, Table 11.1-8, 3/04)	0.032	lb/ton
Control Efficiency = 0%	0	%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (0.032 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 21.26 ton/yr	**21.26**	ton/yr

Total HAPs Emissions:

Emission Factor = 0.01 lb/ton (Waste oil-fired dryer with fabric filter, AP 42, Table 11.1-10, 3/04)	0.01	lb/ton
Control Efficiency = 0%	0	%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (0.01 lb/ton) * (ton/2000 lb) = 6.64 ton/yr	**6.64**	ton/yr
Emission Factor = 9.3016 ton/yr	**6.64**	ton/yr

CO_2 Emissions:

Emission Factor = 33 lb/ton (Waste oil-fired dryer, AP 42, Table 11.1-7, 3/04)	33	lb/ton
Control Efficiency = 0%	0	%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (33 lb/ton) * (ton/2000 lb) * (1 - 0/100) =	**21925**	ton/yr

Hot Oil Heater

Production Rate = 15.10 gal/hr (Company information)	15.10	gal/hr
Maximum Hours of Operation = 2,200 hrs/yr	2,200	hrs/yr

CO Emissions:

Emission Factor = 0.0012 lb/gal (AP-42, Section 11.1, Table 11.1-13, No. 2 Fuel Oil, 3/04)	0.0012	lb/gal
Control Efficiency = 0%	0	%
Calculation: (2200 hrs/yr) * (15.10 gal/hr) * (0.0012 lb/gal) * (ton/2000 lb) * (1 - 0/100) = 0.02 ton/yr	**0.02**	ton/yr

CO_2 Emissions:

Emission Factor = 28 lb/gal (AP-42, Section 11.1, Table 11.1-13, No. 2 Fuel Oil, 3/04)	28	lb/gal
Control Efficiency = 0%	0	%
Calculation: (2200 hrs/yr) * (15.10 ton/yr) * (28 lb/gal) * (ton/2000 lb) * (1 - 0/100) = 465.08 ton/yr	**465.08**	ton/yr

Conveyor Transfer Point (SCC 3-05-02006)

Maximum Process Rate = 604 ton/hr (Maximum plant process rate)	604	ton/hr
Maximum Hours of Operation = 2,200 hrs/yr	2,200	hrs/yr
Number of Transfers = 3 transfer (Company Information, Excludes RAP transfers)	3	transfer

Filterable PM Emissions:

Emission Factor = 0.003 lb/ton (0.0030 uncontrolled, 0.00014 controlled, AP 42, Table 11.19.2-2, 8/04)	0.003	lb/ton
Control Efficiency = 0%	0	%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (0.003 lb/ton) * (ton/2000 lb) * (3 transfer) * (1 - 0/100) = 5.98 ton/yr	**5.98**	ton/yr

Filterable PM_{10} Emissions:

Emission Factor = 0.0011 lb/ton (0.00110 uncontrolled, 0.000046 controlled, AP 42, Table 11.19.2-2, 8/04)	0.0011	lb/ton
Control Efficiency = 0%	0	%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (0.0011 lb/ton) * (ton/2000 lb) * (3 transfer) * (1 - 0/100) = 2.19 ton/yr	**2.19**	ton/yr

Filterable $PM_{2.5}$ Emissions:

Emission Factor = 0.000013 lb/ton (0.000013 controlled, AP 42, Table 11.19.2-2, 8/04)	0.000013	lb/ton
Control Efficiency = 0%	0	%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (0.000013 lb/ton) * (ton/2000 lb) * (3 transfer) * (1 - 0/100) = 0.03 ton/yr	**0.03**	ton/yr

Condensable $PM_{2.5}$ Emissions:

Emission Factor = 0 lb/ton (non-combustion source; therefore, no CPM)	0	lb/ton
Control Efficiency = 0%	0	%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (0 lb/ton) * (ton/2000 lb) * (3 transfer) * (1 - 0/100) = 0.00 ton/yr	**0.00**	ton/yr

Cold Aggregate Storage Piles

Maximum Process Rate = 390 ton/hr (Maximum plant process rate)	390	ton/hr
Maximum Hours of Operation = 2,200 hrs/yr	2,200	hrs/yr
Number of Piles = 2 piles	2	piles

Filterable PM Emissions:

Predictive equation for emission factor provided per AP 42, Sec. 13.2.4.3, 11/06.

Emission Factor = k (0.0032) * (U/5)^1.3 * (M / 2)^-1.4 = 0.00331 lb/ton	0.00331	lb/ton
Where: k = particle size multiplier = 0.74 (Value for PM < 30 microns per AP 42, Sec. 13.2.4.3, 11/06)	0.74	
U = mean wind speed = 10 mph (Estimate based on values provided in AP 42, Sec. 13.2.4.3, 11/06)	10	mph
M = material moisture content = 3% (Estimate based on values provided in AP 42, Sec. 13.2.4.3, 11/06)	3.0	%
Control Efficiency = 0% (Water or chemical spray)	0	%
Calculation: (390 ton/hr) * (2200 hrs/yr) * (0.00331 lb/ton) * (ton/2000 lb) * (2 piles) * (1 - 0/100) = 2.84 ton/yr	**2.84**	ton/yr

Filterable PM_{10} Emissions:

Predictive equation for emission factor provided per AP 42, Sec. 13.2.4.3, 11/06.

Emission Factor = k (0.0032) * (U/5)^1.3 * (M / 2)^-1.4 = 0.00156 lb/ton	0.00156	lb/ton
Where: k = particle size multiplier = 0.35 (Value for PM < 10 microns per AP 42, Sec. 13.2.4.3, 11/06)	0.35	
U = mean wind speed = 10 mph (Estimate based on values provided in AP 42, Sec. 13.2.4.3, 11/06)	10	mph
M = material moisture content = 3% (Estimate based on values provided in AP 42, Sec. 13.2.4.3, 11/06)	3.0	%
Control Efficiency = 0% (Water or chemical spray)	0	%
Calculation: (390 ton/hr) * (2200 hrs/yr) * (0.00156 lb/ton) * (ton/2000 lb) * (2 piles) * (1 - 0/100) = 1.34 ton/yr	**1.34**	ton/yr

Filterable $PM_{2.5}$ Emissions:

Predictive equation for emission factor provided per AP 42, Sec. 13.2.4.3, 11/06.		
Emission Factor = k (0.0032) * (U/5)^1.3 * (M / 2)^-1.4 = 0.00024 lb/ton	0.00024	lb/ton
Where: k = particle size multiplier = 0.053 (Value for PM < 2.5 microns per AP 42, Sec. 13.2.4.3, 11/06)	0.053	
U = mean wind speed = 10 mph (Estimate based on values provided in AP 42, Sec. 13.2.4.3, 11/06)	10	mph
M = material moisture content = 3% (Estimate based on values provided in AP 42, Sec. 13.2.4.3, 11/06)	3.0	%
Control Efficiency = 0% (Water or chemical spray)	0	%
Calculation: (390 ton/hr) * (2200 hrs/yr) * (0.00024 lb/ton) * (ton/2000 lb) * (2 piles) * (1 - 0/100) = 0.20 ton/yr	**0.20**	ton/yr

Condensable $PM_{2.5}$ Emissions:

Predictive equation for emission factor provided per AP 42, Sec. 13.2.4.3, 11/06.		
Emission Factor = k (0.0032) * (U/5)^1.3 * (M / 2)^-1.4 = 0.00000 lb/ton	0.00000	lb/ton
Where: k = particle size multiplier = 0 (non-combustion source; therefore, no CPM)	0	
U = mean wind speed = 10 mph (Estimate based on values provided in AP 42, Sec. 13.2.4.3, 11/06)	10	mph
M = material moisture content = 3% (Estimate based on values provided in AP 42, Sec. 13.2.4.3, 11/06)	3.0	%
Control Efficiency = 0% (Water or chemical spray)	0	%
Calculation: (390 ton/hr) * (2200 hrs/yr) * (0.00000 lb/ton) * (ton/2000 lb) * (2 piles) * (1 - 0/100) = 0.00 ton/yr	**0.00**	ton/yr

Fines Screening (SCC 3-05-020-21)

Maximum Process Rate = 604 ton/hr (Maximum plant process rate)	604	ton/hr
Maximum Hours of Operation = 2,200 hrs/yr	2,200	hrs/yr
Number of Screens = 1 screen (Company Information, Excludes RAP screen)	1	screen

Total PM Emissions:

Emission Factor = 0.0022 lb/ton (0.025 uncontrolled, 0.0022 controlled, AP 42, Table 11.19.2-2, 8/04)	0.0022	lb/ton
Control Efficiency = 0% (built into emission factor)	0	%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (0.0022 lb/ton) * (ton/2000 lb) * (1 screen) * (1 - 0/100) = 1.46 ton/yr	**1.46**	ton/yr

Total PM_{10} Emissions:

Emission Factor = 0.0022 lb/ton (0.0087 uncontrolled, 0.00074 controlled, AP 42, Table 11.19.2-2, 8/04)	0.0022	lb/ton
Control Efficiency = 0% (built into emission factor)	0	%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (0.0022 lb/ton) * (ton/2000 lb) * (1 screen) * (1 - 0/100) = 1.46 ton/yr	**1.46**	ton/yr

Total $PM_{2.5}$ Emissions:

Emission Factor = 0.00005 lb/ton (0.000050 controlled, AP 42, Table 11.19.2-2, 8/04)	0.00005	lb/ton
Control Efficiency = % (built into emission factor)		%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (0.00005 lb/ton) * (ton/2000 lb) * (1 screen) * (1 - /100) = 0.03 ton/yr	**0.03**	ton/yr

Silo Filling (SCC 3-05-002-13)

Maximum Process Rate = 604 ton/hr (Maximum plant process rate)	604	ton/hr
Maximum Hours of Operation = 2,200 hrs/yr	2,200	hrs/yr

Filterable $PM_{2.5}$ Emissions:

Assume all PM is CPM, AP 42, Table 11.1-14, footnote b, 3/04.

Condensable $PM_{2.5}$ Emissions:

Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04. Emission Factor = 0.000332 + 0.00105(-V)e^((0.0251)(T + 460) - 20.43) = 0.00059 lb/ton (Total PM, AP-42, Table 11.1-14, footnote b, 3/04)	0.00059	lb/ton
Where: V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	F
Control Efficiency = 0%	0	%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (0.00059 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 0.39 ton/yr	**0.39**	ton/yr

VOC Emissions:

Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04. Emission Factor = 0.0504(-V)e^((0.0251)(T + 460) - 20.43) = 0.01219 lb/ton	0.01219	lb/ton
Where: V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	F
Control Efficiency = 0%	0	%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (0.01219 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 8.10 ton/yr	**8.10**	ton/yr

CO Emissions:

Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04. Emission Factor = 0.00488(-V)e^((0.0251)(T + 460) - 20.43) = 0.00118 lb/ton	0.00118	lb/ton
Where: V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	F
Control Efficiency = 0%	0	%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (0.00118 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 0.78 ton/yr	**0.78**	ton/yr

CH_4 Emissions:

Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04. Emission Factor = 0.0172(-V)e^((0.0251)(T + 460) - 20.43) * 0.26% = 0.00001 lb/ton	0.00001	lb/ton
Where: V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	F
Control Efficiency = 0%	0	%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (0.00001 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 0.01 ton/yr	**0.01**	ton/yr
CO2e = 0.01 * 21 = 0.15 ton/yr	**0.15**	ton/yr

Plant Load-Out (SCC 3-05-002-14)

Maximum Process Rate = 604 ton/hr (Maximum plant process rate)	604	ton/hr
Maximum Hours of Operation = 2,200 hrs/yr	2,200	hrs/yr

Filterable $PM_{2.5}$ Emissions:

Assume all PM is CPM, AP 42, Table 11.1-14, footnote b, 3/04.

Condensable $PM_{2.5}$ Emissions:

Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04.		
Emission Factor = 0.000181 + 0.00141(-V)e^((0.0251)(T + 460) - 20.43) = 0.00052 lb/ton (Total PM, AP-42, Table 11.1-14, footnote b, 3/04)	0.0005 2	lb/ton
Where: V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	F
Control Efficiency = 0%	0	%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (0.00052 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 0.35 ton/yr	**0.35**	ton/yr

VOC Emissions:

Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04.		
Emission Factor = 0.0172(-V)e^((0.0251)(T + 460) - 20.43) * 94% = 0.00391 lb/ton	0.0039 1	lb/ton
Where: V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	F
Control Efficiency = 0%	0	%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (0.00391 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 2.60 ton/yr	**2.60**	ton/yr

CH_4 Emissions:

Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04.		
Emission Factor = 0.0172(-V)e^((0.0251)(T + 460) - 20.43) * 6.5% = 0.00027 lb/ton	0.0002 7	lb/ton
Where: V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	F
Control Efficiency = 0%	0	%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (0.00027 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 0.18 ton/yr	**0.18**	ton/yr
CO2e = 0.18 * 21 = 3.77 ton/yr	**3.77**	ton/yr

CO Emissions:

Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04.		
Emission Factor = 0.00558(-V)e^((0.0251)(T + 460) - 20.43) = 0.00135 lb/ton	0.0013 5	lb/ton
Where: V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	F
Control Efficiency = 0%	0	%
Calculation: (604 ton/hr) * (2200 hrs/yr) * (0.00135 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 0.90 ton/yr	**0.90**	ton/yr

Haul Roads

Vehicle Miles Traveled (VMT) per Day = 5 VMT/day (Estimate)	5	VMT/day
VMT per hour = (5 VMT/day) * (day/24 hrs) = 0.21 VMT/hr	0.21	VMT/hr
Hours of Operation = 2,200 hrs/yr	2,200	hrs/yr

PM Emissions:

Predictive equation for emission factor for unpaved roads at industrial sites provided per AP 42, Ch. 13.2.2, 11/06.

Emission Factor = k * (s / 12)^a * (W / 3)^b = 12.46 lb/VMT	12.46	lb/VMT
Where: k = constant = 4.9 lbs/VMT (Value for PM30/TSP, AP 42, Table 13.2.2-2, 11/06)	4.9	lbs/VMT
s = surface silt content = 7.1 % (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06)	7.1	%
W = mean vehicle weight = 54 tons (1994 average loaded/unloaded or a 40 ton truck)	54	tons
a = constant = 0.7 (Value for PM30/TSP, AP 42, Table 13.2.2-2, 11/06)	0.7	
b = constant = 0.45 (Value for PM30/TSP, AP 42, Table 13.2.2-2, 11/06)	0.45	
Control Efficiency = 50% (Water spray or chemical dust suppressant)	50	%
Calculation: (2200 hrs/yr) * (0.21 VMT/hr) * (12.46 lb/VMT) * (ton/2000 lb) = 2.86 tons/yr (Uncontrolled Emissions)	**2.86**	tons/yr
Calculation: (2200 hrs/yr) * (0.21 VMT/hr) * (12.46 lb/VMT) * (ton/2000 lb) * (1-50/100) = 1.43 tons/yr (Apply 50% control efficiency)	**1.43**	tons/yr

PM_{10} Emissions:

Predictive equation for emission factor for unpaved roads at industrial sites provided per AP 42, Ch. 13.2.2, 11/06.

Emission Factor = k * (s / 12)^a * (W / 3)^b = 3.43 lb/VMT	3.43	lb/VMT
Where: k = constant = 1.5 lbs/VMT (Value for PM10, AP 42, Table 13.2.2-2, 11/06)	1.5	lbs/VMT
s = surface silt content = 7.1 % (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06)	7.1	%
W = mean vehicle weight = 54 tons (1994 average loaded/unloaded or a 40 ton truck)	54	tons
a = constant = 0.9 (Value for PM10, AP 42, Table 13.2.2-2, 11/06)	0.9	
b = constant = 0.45 (Value for PM10, AP 42, Table 13.2.2-2, 11/06)	0.45	
Control Efficiency = 50% (Water spray or chemical dust suppressant)	50	%
Calculation: (2200 hrs/yr) * (0.21 VMT/hr) * (3.43 lb/VMT) * (ton/2000 lb) = 0.79 tons/yr (Uncontrolled Emissions)	**0.79**	tons/yr
Calculation: (2200 hrs/yr) * (0.21 VMT/hr) * (3.43 lb/VMT) * (ton/2000 lb) * (1-50/100) = 0.39 tons/yr (Apply 50% control efficiency)	**0.39**	tons/yr

$PM_{2.5}$ Emissions:

Predictive equation for emission factor for unpaved roads at industrial sites provided per AP 42, Ch. 13.2.2, 11/06.

Emission Factor = k * (s / 12)^a * (W / 3)^b = 0.34 lb/VMT	0.34	lb/VMT
Where: k = constant = 0.15 lbs/VMT (Value for PM2.5, AP 42, Table 13.2.2-2, 11/06)	0.15	lbs/VMT
s = surface silt content = 7.1 % (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06)	7.1	%

W = mean vehicle weight = 54 tons (1994 average loaded/unloaded or a 40 ton truck)	54	tons
a = constant = 0.9 (Value for PM2.5, AP 42, Table 13.2.2-2, 11/06)	0.9	
b = constant = 0.45 (Value for PM2.5, AP 42, Table 13.2.2-2, 11/06)	0.45	
Control Efficiency = 50% (Water spray or chemical dust suppressant)	50	%
Calculation: (2200 hrs/yr) * (0.21 VMT/hr) * (0.34 lb/VMT) * (ton/2000 lb) = 0.08 tons/yr (Uncontrolled Emissions)	**0.08**	tons/yr
Calculation: (2200 hrs/yr) * (0.21 VMT/hr) * (0.34 lb/VMT) * (ton/2000 lb) * (1-50/100) = 0.04 tons/yr (Apply 50% control efficiency)	**0.04**	tons/yr

Diesel Engine/Generator Set

Note: Emissions are based on the power output of the engine (980 hp).

Operational Capacity of Engine = 980 hp	980	hp
Hours of Operation = 2,200.00 hours	2,200.00	hours

Total $PM/PM_{10}/PM_{2.5}$ Emissions:

Emission Factor = 0.0022 lbs/hp-hr (All PM < 1 mm, AP-42, Sec. 3.3, Table 3.3-1, 10/96)	2.20E-03	lbs/hp-hr
Calculation: (2,200 hours) * (980 hp) * (0.0022 lbs/hp-hr) * (ton/2000 lb) = 2.37 ton/yr	**2.37**	ton/yr
Calculation: (2,200 hours) * (980 hp) * (0.0022 lbs/hp-hr) = 4,743.20 lbs/yr	**4743.20**	lbs/yr

NOx Emissions:

Emission Factor = 0.031 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	0.031	lbs/hp-hr
Calculation: (2,200 hours) * (980 hp) * (0.031 lbs/hp-hr) * (ton/2000 lb) = 33.42 ton/yr	**33.42**	ton/yr
Calculation: (2,200 hours) * (980 hp) * (0.031 lbs/hp-hr) = 66,836.00 lbs/yr	**66836.00**	lbs/yr

CO Emissions:

Emission Factor = 0.00668 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	6.68E-03	lbs/hp-hr
Calculation: (2,200 hours) * (980 hp) * (0.00668 lbs/hp-hr) * (ton/2000 lb) = 7.20 ton/yr	**7.20**	ton/yr
Calculation: (2,200 hours) * (980 hp) * (0.00668 lbs/hp-hr) = 14,402.08 lbs/yr	**14402.08**	lbs/yr

VOC Emissions:

Emission Factor = 0.0025141 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, TOC, Exhaust & Crankcase, 10/96)	2.51E-03	lbs/hp-hr
Calculation: (2,200 hours) * (980 hp) * (0.0025141 lbs/hp-hr) * (ton/2000 lb) = 2.71 ton/yr	**2.71**	ton/yr
Calculation: (2,200 hours) * (980 hp) * (0.0025141 lbs/hp-hr) = 5,420.40 lbs/yr	**5420.40**	lbs/yr

SOx Emissions:

Emission Factor = 0.00205 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	2.05E-03	lbs/hp-hr
Calculation: (2,200 hours) * (980 hp) * (0.00205 lbs/hp-hr) * (ton/2000 lb) = 2.210 ton/yr	**2.21**	ton/yr
Calculation: (2,200 hours) * (980 hp) * (0.00205 lbs/hp-hr) = 4,419.80 lbs/yr	**4419.80**	lbs/yr

CO_2 Emissions:

Emission Factor = 1.15 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	1.15	lbs/hp-hr
Calculation: (2,200 hours) * (980 hp) * (1.15 lbs/hp-hr) * (ton/2000 lb) = 1,239.70 ton/yr	**1239.70**	ton/yr
Calculation: (2,200 hours) * (980 hp) * (1.15 lbs/hp-hr) =	**2479400.00**	lbs/yr

V. Existing Air Quality

This permit is for a portable asphalt plant to be located in Section 13, Township 24N, Range 59E in Richland County, Montana. Richland County, and in those areas for which this facility is permitted to operate, have been designated unclassified/attainment with all ambient air quality standards, and where there are no major air pollution sources in the surrounding area.

VI. Air Quality Impacts

This permit contains conditions and limitations that would protect air quality for the site and surrounding area. Furthermore, this facility is a portable source that would operate on an intermittent and temporary basis, so any effects to air quality will be minor and of limited duration.

VII. Ambient Air Impact Analysis

Based on the information provided and the conditions established in MAQP #5120-00, the Department determined 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.

VIII. 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	
✓		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	✓	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	✓	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	✓	4. Does the action deprive the owner of all economically viable uses of the property?
	✓	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?
	✓	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	✓	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?
	✓	7a. Is the impact of government action direct, peculiar, and significant?
	✓	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	✓	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?
	✓	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.

IX. Environmental Assessment

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

Analysis Prepared By: R. Payne
Date: 3/16/15

DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air Resources Management Bureau
P.O. Box 200901, Helena, MT 59620
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FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued To: Knife River North Central

Montana Air Quality Permit number (MAQP): 5120-00

Preliminary Determination Issued: 3/20/15
Department Decision Issued: 5/11/15
Permit Final: 5/27/15

1. *Legal Description of Site*: Knife River operates a portable asphalt plant, which will initially be located at Township 24N, Range 59E, Section 13 in Richland County, Montana.

2. *Description of Project*: Knife River North Central would operate a portable drum mix asphalt plant and associated equipment with a 604 ton per hour (tph) maximum production capacity and a single diesel-fired generator set with a capacity of up to 980 horsepower (hp) at various locations throughout Montana.

3. *Objectives of Project*: The objective of this project would be to produce revenue for Knife River North Central through the sale and use of asphalt. The issuance of the permit would allow Knife River North Central to operate the permitted equipment at various locations throughout Montana, including the initial site location.

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 MAQP #5120-00-00.

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			✓			Yes
B	Water Quality, Quantity, and Distribution			✓			Yes
C	Geology and Soil Quality, Stability and Moisture			✓			Yes
D	Vegetation Cover, Quantity, and Quality			✓			Yes
E	Aesthetics			✓			Yes
F	Air Quality			✓			Yes
G	Unique Endangered, Fragile, or Limited Environmental Resources			✓			Yes
H	Demands on Environmental Resource of Water, Air and Energy			✓			Yes
I	Historical and Archaeological Sites				✓		Yes
J	Cumulative and Secondary Impacts			✓			Yes

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

The following comments have been prepared by the Department.

A. Terrestrial and Aquatic Life and Habitats

This permitting action would be expected to have a minor effect on terrestrial and aquatic life and habitats, as the proposed plant would operate within an agricultural area. Furthermore, the air emissions would likely have only minor effects on terrestrial and aquatic life because facility emissions would be well dispersed in the area of the operation (as described in Section 7.F of this EA) and would have intermittent and seasonal operations. Therefore, only minor and temporary effects to terrestrial and aquatic life and habitat would be expected from the proposed project.

B. Water Quality, Quantity and Distribution

Water would be required for dust suppression on the mineral processing equipment and surrounding facility area, including haul roads. This water use would be expected to only cause minor, if any, impacts to water resources because only a small volume of water would be required to be used. In addition, the facility would emit air pollutants and

corresponding deposition of pollutants would occur, as described in Section 7.F. of this EA. However, the Department determined that due to dispersion characteristics of pollutants and conditions that would be placed in MAQP #5120-00, any impacts from deposition of pollution on water quality, quantity, and distribution expected would be minor.

C. Geology and Soil Quality, Stability and Moisture

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

D. Vegetation Cover, Quantity, and Quality

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

E. Aesthetics

The asphalt plant would be initially located in a total property area of 107 acres. Activity within the facility would create noise while operating at the proposed site. The application states the nearest home and/or structure is 0.3 mile from the initial proposed project site; therefore, visual and noise impacts would be minor and short-lived.

F. Air Quality

Air quality impacts from the proposed project would likely be minor because the facility would operate on an intermittent and temporary basis. MAQP #5120-00 includes conditions limiting the facility's opacity and particulate matter emissions; limit total emissions from the portable asphalt plant and any additional equipment operated at the site to 250 tons per year or less of any individual pollutant, excluding fugitive emissions; and limit the hours of operation of the diesel engine/generator sets.

Further, the Department determined that this facility would be a minor source of emissions as the source's potential to emit is limited to below the major source threshold level of 100 tons per year (tpy) for any pollutant. Pollutant deposition from the facility would expect to be minimal because the pollutants emitted are widely dispersed (from factors such as wind speed and wind direction) and exhibit minimal deposition on the surrounding area. Therefore, air quality impacts from operating the crushing facility in this area would be expected to be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The Department contacted the Montana Natural Heritage Program (MNHP) in an effort to identify and species of concern that may be found in the area where the initial proposed crushing/screening facility will occur. Search results have concluded there is one animal species of concern in the area. Area, in this case, would be defined by the township and range of the proposed site, with an additional 1-mile buffer. The known species of concern is the Whooping Crane. Specific effects of operating the proposed project in this area would be minor since the project is small, temporary, and operates on an intermittent basis. Therefore, the Department determined that any effects upon these species would likely be minor and short-lived.

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

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

I. Historical and Archaeological Sites

The Department contacted the Montana Historical Society - State Historical Preservation Office (SHPO) in an effort to identify any historical and/or archaeological sites that may be present in the location of the facility. No archaeological sites are known to be present. Because no structures would be expected to be removed or altered as a result of issuance of MAQP #5120-00, no impacts to known historically significant sites would be expected. Any impacts to historical and archaeological impacts would be expected to be minor.

J. Cumulative and Secondary Impacts

The operation of the crushing and screening equipment would likely cause minor cumulative and secondary impacts to the physical and biological aspects of the human environment because the facility would be limited in the amount of emissions allowed to be released to the atmosphere. Emissions and noise generated from the equipment would likely result in only minor impacts to the area, as the facility would be seasonal and temporary. The proposed project would be short-term in nature, and likely have minor cumulative effects upon resources within the area. These resources include water, terrestrial and aquatic life, soils, and vegetation. Overall, cumulative and secondary impacts to the physical and biological aspects of the human environment would likely be minor.

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

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Social Structures and Mores				✓		Yes
B	Cultural Uniqueness and Diversity				✓		Yes
C	Local and State Tax Base and Tax Revenue			✓			Yes
D	Agricultural or Industrial Production			✓			Yes
E	Human Health			✓			Yes
F	Access to and Quality of Recreational and Wilderness Activities				✓		Yes
G	Quantity and Distribution of Employment				✓		Yes
H	Distribution of Population				✓		Yes
I	Demands for Government Services			✓			Yes
J	Industrial and Commercial Activity			✓			Yes
K	Locally Adopted Environmental Plans and Goals			✓			Yes
L	Cumulative and Secondary Impacts			✓			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 portable asphalt plant would not be expected to cause any disruption to native or traditional lifestyles or communities (social structures and mores) in the area because the source would be considered a minor industrial source and emissions and would have temporary and intermittent operations. The Department has determined that no impact to social structures and mores would be expected.

B. Cultural Uniqueness and Diversity

The cultural uniqueness and diversity of this area would not be impacted by the operation of the portable asphalt plant because the facility would be a portable source, with seasonal and intermittent operations. The predominant use of this area would not change as a result of the proposed operation. Therefore, the cultural uniqueness and diversity of the area would not be impacted.

C. Local and State Tax Base and Tax Revenue

Only minor impacts to the local and state tax base and revenue could be expected from the employees and facility production. Because the facility would be portable and temporary, it is unlikely that people would move to the area as a result of this project. Impacts to local tax base and revenue would be minor and short-term because the source would be portable and the money generated for taxes would be widespread.

D. Agricultural or Industrial Production

The proposed project would have a minor impact on local industrial production since the facility would increase local asphalt production and air emissions slightly. The facility would be located in an existing gravel pit on private land. Because minimal deposition of air pollutants would occur on the surrounding land (as described above in Section 7.F), only minor effects on the surrounding vegetation or agricultural production would occur. In addition, the facility operations would be small and temporary in nature and would be permitted with operational conditions and limitations that would minimize impacts upon surrounding vegetation, as described in Section 7.D above. Pollutant deposition from the project would be minimal because the emissions would be well controlled, widely dispersed (from factors such as wind speed and wind direction), and would have minimal deposition on the surrounding area.

E. Human Health

Conditions would be incorporated into MAQP #5120-00 to ensure that the asphalt plant would operate in compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health. As described in Section 7.F of this EA, the air emissions from this project would be minimized by the use of a baghouse, water spray for fugitive emissions, and other process limits that would be required by MAQP #5120-00. Furthermore, the applicant has stated that they plan to operate on an intermittent and seasonal basis and therefore only minor impacts would be expected on human health from the proposed facility.

F. Access to and Quality of Recreational and Wilderness Activities

Based on information received from Knife River there is no hunting access, recreational activities or wilderness areas near the initial proposed project site. Therefore, no impacts to the access to and quality of recreational and wilderness activities would be expected.

G. Quantity and Distribution of Employment

The portable asphalt plant would only require a few employees to operate and would have seasonal and intermittent operations. The operation would be considered a portable source and would not be expected to have long-term affects upon the quantity and distribution of employment in any given area of operation.

H. Distribution of Population

The proposed project would be considered a portable industrial facility and would require few employees to operate. No individuals would be expected to permanently relocate to this area. Therefore, the operation would not impact the normal population distribution in the initial area of operation or any future operating site.

I. Demands for Government Services

The operation of the portable asphalt plant would cause minimal demand for government services. This project would result in an increase in traffic on existing roadways. Government services would be required for acquiring the appropriate permits for the proposed project and to verify compliance with the permits that would be issued. However, any increase or demand for government services would be minor given the temporary and portable nature of the project.

J. Industrial and Commercial Activity

The proposed project would represent only a minor increase in the industrial activity in the proposed area of operation because the facility would be a small industrial source, portable and temporary in nature. Some additional industrial or commercial activity would be expected as a result of the proposed operation; however, these impacts to the industrial and commercial activity would be minor.

K. Locally Adopted Environmental Plans and Goals

The Department is unaware of any locally adopted environmental plans and goals in the proposed initial project location. MAQP #5120-00 contains conditions and limits for protecting air quality and to keep facility emissions in compliance with any applicable ambient air quality standards. Because the facility would have intermittent and seasonal operations any impacts from the facility would be minor and short-lived.

L. Cumulative and Secondary Impacts

Overall, the proposed project would cause minor cumulative and secondary impacts to the social and economic aspects of the human environment in the immediate area of operation because the source would be portable and the footprint of the facility would remain relatively small. Furthermore, no other industrial operations are expected to result from this permitting action. Any increase in traffic would have minor effects on local traffic in the immediate area.

This facility may be operated in conjunction with other equipment owned and operated by Knife River North Central, but any cumulative impacts or secondary impacts are expected to be minor and short-term. In conclusion, the source is relatively small, the facility emissions would be minimal, and the project would have only minor cumulative and secondary impacts.

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 a portable asphalt plant. MAQP #5120-00 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

EA prepared by: R. Payne
Date: 3/12/15