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DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE A Q PROGRAM

Permit–to–Construct Application

Knife River, Inc.

Portable Hot Mix Asphalt Plant

Prepared for

Knife River

Submitted to

Idaho Department of Environmental Quality

March 2008

CH2MHILL

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DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE A Q PROGRAM

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1.0 Introduction

On behalf of Knife River, CH2M HILL is requesting a Permit to Construct approval in accordance with Idaho Administrative Procedures Act (IDAPA) 58.01.01.400 and 58.01.01.336 for portable hot mix asphalt (HMA) batch plant. This permit application was initially submitted as a pre-permit approval permit to construct under IDAPD 58.010.01.213 on February 22, 2008. This application has been revised to address Idaho Department of Environmental Protection (IDEQ) comments and is now being submitted as a Tier II permit to construct application for a portable source.

The HMA plant facility will be located on a site in Notus, Idaho that is owned by Knife River. As this is a portable plant, the HMA plant may relocate to other Idaho sites. The Notus location represents the minimum site boundaries that will be provided for this plant if it is re-located to another Idaho location. The proposed Notus HMA plant boundary sits on approximately 15 acres of a larger 82 acre site owned by Knife River. This information provided in the application, demonstrates compliance for the air contaminant permit requirements for IDAPA 58.01.01.401 for Tier II application procedures for the 15 acre HMA parcel. The HMA parcel and the larger Notus site are illustrated in a Site Location Map in Exhibit 1.

An application fee of $1,000.00 has been included with the application submittal on February 22, 2008 in accordance with IDAPA 58.01.01.226.

An informational meeting was held at the Caldwell Public Library located at 1010 Dearborn Street, Caldwell, Idaho, on March 4, 2008, from 4:00 p.m. to 5:00 p.m. A public announcement was published in the Idaho Press Tribune newspaper on February 20, 2008. A copy of the public announcement is included in Appendix A. No persons besides Knife River and CH2M HILL personnel attended the informational meeting. Two meeting were held with the IDEQ, on 12/20/2007 and on 3/12/2008 to discuss this project.

This Permit-to-Construct (PTC) application includes a process description, plot plan, process flow diagram, emission estimates, modeling protocol and results, and a regulatory review. Permit application forms are provided in Appendix B.

2.0 Process Description

Description

A hot mix asphalt facility is a plant where aggregates are mixed, heated and dried, and then combined with liquid asphalt to create hot mix asphalt. This hot mix asphalt is used for road surfaces, runways, erosion control and a variety of other engineered needs. A plant can be constructed to be permanent or portable.

The HMA manufacturing process is typified by the following types of plants: batch mix plants, parallel flow mix plants and counter flow mix plants. The Knife River plant is a portable parallel flow mix HMA plant.

The parallel flow drum dryer design uses proportioning cold feed (aggregate and recycled asphalt) controls for the process materials. Sized aggregate is introduced to the parallel flow drum at the burner end. As the drum rotates, the aggregates and the combustion air move in parallel towards the other end of the drum. Recycled Asphalt Pavement (RAP) is introduced into the process at about the

mid-point of the dryer in the lower temperature zone. Drying of all materials takes place in the rotating, slightly inclined, direct-fired drum dryer. During the drying process the mixture is heated to temperatures about 325F and then coated with liquid asphalt cement. In this plant, the heated aggregate exits the drum and drops into a coater where the liquid asphalt and aggregate are then mixed. The liquid asphalt added to the external coater and away from dryer combustion gases. This method minimizes volatilization of the liquid asphalt, and produces lower overall emissions. Liquid asphalt cement flow is controlled by a variable flow pump electronically linked to the aggregate weigh scales. The resulting HMA then exits the coater and is conveyed to a storage silo where it is loaded into trucks for transport to the work site.

The exhaust gases from the drum dryer and coater are collected and ducted to a baghouse by an induced draft fan. Fines collected by the baghouse are returned to the coater for blending with the aggregate and production of HMA.

Aggregate and RAP will constitute about 94 percent by weight of the total HMA mixture but can vary with the types of aggregate and RAP used, and the grade of asphalt cement to be produced.

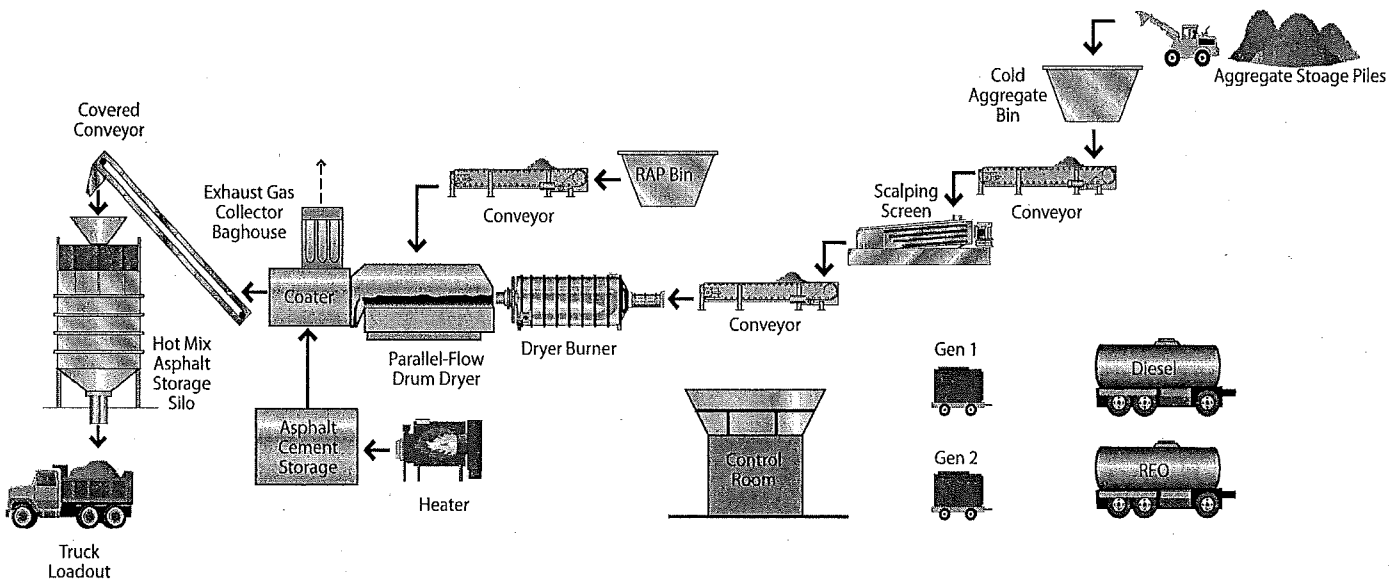
The parallel flow Knife River HMA plant will have a maximum HMA production rate of 280 tons per hour and a maximum annual HMA production rate of 325,000 tons per year. The plant is manufactured in 1985 by ASTEC (or equivalent). The portable facility will consist of the following:

- One diesel fueled burner (maximum rated heat input requirement of 96.8 millionBtu/hr, typical firing rate of 50 to 60 millionBTU/hr.)
- One drum dryer
- One 35,000-gallon asphalt oil above ground storage tank
- One heater which provides heat for the asphalt oil storage tank (maximum diesel fuel heat input is 2.1 millionBTU/hr.)
- One operating generator rated at 1,125 HP
- One night generator rated at 188 HP
- One 10,000-gallon diesel tank
- One 7,000-gallon RFO tank
- Two bin-feeders, with total of 5 bins.
- One truck-loading storage silo
- Conveyors and screens
- One control room

This HMA has the ability to use a wide variety of fuels. Fuels that may be used are diesel, re-refined fuel oil (RFO), and natural gas. Depending on location, line power may be used in lieu of the generators for electrical energy. For this permit application, all fuels (diesel, RFO, and natural gas) were presumed to be utilized, with no line power connection. This represents the worst-case operation for this portable plant. Emissions were calculated for each fuel and the worst-case emissions scenario was used for modeling purposes. Emissions for the liquid and gaseous fuels are shown in Appendix C.

3.0 Process Flow Diagram

A process flow diagram of the facility including the process equipment described in Section 2.0 is presented below:



4.0 Scaled Plot Plan and Site Location

A scaled plot plan for the HMA plant is illustrated in Figure 1 "Typical Location." HMA emission sources and equipment arrangement is shown on this figure. Note that since this plant is a portable plant, and the specific orientation of equipment, access and egress points will be determined by the operating site. For the purposes of this application, the 15 acre parcel is the minimum site size that will be used for the HMA plant. This boundary was determined to be the minimum size required to demonstrate compliance with Idaho ambient air standards for criteria pollutants and air toxics.

A site location is included as Exhibit 1. The 15 acre parcel is to be placed on an 82 acre site owned by Knife River on Dixie River Road in Notus, ID. Exhibit 1 also shows the expected layout and placement of the 15 acre HMA plant on the 82 acre site. The 82 acre site is defined by Dixie River Road and a fence to the north, drains and canals to the east and the south, and a fence line to the west. In addition, the main gate and truck gates to the site will be posted with "No Trespassing signage. These property boundaries and administrative controls are considered sufficient to prevent public access to the site. The HMA plant, when subsequently re-located, will remain centrally located on a "typical" 15 acre parcel area for the purposes of this portable plant permit.

Note that this 82 acre Notus site is also permitted for a concrete batch plant (CBP). A CBP operating permit was issued to Knife River on December 7, 2007 (Permit No. 2007.0195). The permitted CBP plant is also portable and has not yet been set up at the Notus location. If the CBP is

to be set up at the Notus location, the CBP must have a set back at least 200 meters from the HMA dryer exhaust point to avoid "collocation" considerations. The CBP collocation distance is described in permit condition 2.13.1, 2. The set-back criterion was established at the permit meeting of 3/12/2008 attended by IDEQ, Knife River and CH2M HILL staffs.

5.0 Potential to Emit Emission Estimates

HMA emission estimates were calculated based on emission factors derived from the United States Environmental Protection Agency (USEPA) *Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume 1: Stationary Point and Area Sources.*[1] The other remaining generator emission factors were obtained from *AP-42, Chapter 11 – Mineral Products Industry, 11.1 Hot Mix Asphalt Plants.* Emission estimates, assumptions and manufacturer references are provided in Appendix C.

The following limitations were used to calculate the potential to emit emissions for the portable hot mix asphalt plant:

1. The maximum capacity of the portable Hot Mix Asphalt Plant is 280 cubic yards per hour of final product (HMA). Annual production will be 325,000 tons per year.
2. The facility will operate at the hours necessary to produce up to 325,000 tons per year of HMA. Operation of the facility will vary depending on paving product demand. The facility will typically operate Monday through Saturday from 7:00 AM to 5:30 PM; and total 1,161 hours per year if producing at maximum.

Operational and Other Requirements Specified in this Application

In addition to the hourly and annual production limits, Toxics Reasonably Available Control Technology (T-RACT) reviews for the metals arsenic and chromium; and formaldehyde and POM/PAH concluded that specific controls, equipment or fuel use limitations constitute T-RACT. The T-RACT reviews would also add these obligations:

- The T-RACT for the metals arsenic and chromium concluded that use of virgin fuel or the use of re-refined fuel oil (RFO) in the drum dryer combustion source was T-RACT. "Waste" oil that has not gone through the RFO process is not T-RACT. The HMA plant can burn natural gas, virgin fuel or RFO fuels.
- The T-RACT for POM and PAH is the use of the external coater and operation of the tank heater burner and the drum dryer in accordance with manufacturers specifications.
- The T-RACT for formaldehyde is the use of a covered conveyor to the silo, and the use of an external coater.
- The RFO fuel shall not contain more than 1000ppm total halogens and shall not contain more than 2ppm of polychlorinated biphenols (PCBs) per 40 CFR 279.11 Used Oil Fuel Specifications and 40 CFR 761.20(3) Polychlorinated Biphenyls Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions.

[1] Obtained from EPA website, latest version.

The HMA plant is a portable plant and has been permitted to fit upon an approximate 15 acre parcel and be able to demonstrate compliance under the operational and fuel use parameters described in this application. Should the HMA locate near another emissions source, such as a cement batch plant or a rock crusher, the HMA emissions dryer exhaust source shall be located at least 200 meters (656 feet) away from the cement batch plant or rock crusher emissions source.

- Maintain at least 200 meters from the HMA plant dryer exhaust to any other emissions source such as a CBP or a rock crusher to avoid "co-location." (Permit No. 2007.0195, Condition 2.13.1, 2).

Air dispersion modeling indicated that fugitive dust particulate matter could exceed ambient air standards if operational controls were not required. Operational controls were presumed as part of the final modeling runs. The operational controls on the fugitive dust sources at the HMA plant are:

- All mechanical transfers and drop points shall be kept to a minimum drop height as practical and allowable by the equipment.
- All manual transfers of materials shall be kept to the minimum drop height as practical and allowable by the equipment and the equipment operator.

Additional reasonable and practical controls for fugitive dust are described in the Applicability Section 8 as generally required by IDAPA 58.01.01.650 and 651.

See Appendix E, Modeling Results and Appendix F, T-RACT Results

6.0 Facility Classification

The Knife River facility is classified as a minor source as potential to emit for the emission sources covered under this PTC application are less than 100 tons per year for any of the regulated air pollutants. The facility is classified as an area (minor) source for Hazardous Air Pollutants (HAPs) as the emissions of any single or combined HAPs are less than the 10/25 single/combined tons per year thresholds. The Knife River facility is not a Prevention of Significant Deterioration (PSD) listed category or considered a major source (250 tons per year or greater for any listed pollutant).

The facility is subject to a New Source Performance Standard (NSPS) for Hot Mix Asphalt Plants is an applicable air pollution standard. A previous source test for particulate emissions that demonstrates compliance the NSPS particulate emission standard was submitted to the IDEQ on 2/22/2008. The operating certificate that was issues following successful completion of the stack test is included as Appendix G.

7.0 Ambient Impact Analysis

An air dispersion modeling protocol was prepared by CH2M HILL and submitted to IDEQ on January 3, 2008. The source parameters and modeling assumptions were identified within the modeling protocol. The protocol was approved by Mr. Kevin Schilling of IDEQ via e-mail on January 18, 2008. A copy of the air dispersion modeling protocol along with the IDEQ e-mail approval is included in Appendix D.

The HMA plant is proposed to be located on a 15 acre parcel. For the purposes of this application and modeling review, the 15 acre parcel is the minimum size required to demonstrate compliance with Idaho ambient air standards for criteria pollutants and air toxics. Air dispersion modeling was conducted in accordance with the IDEQ-approved protocol. As this is a portable plant, and the initial location was to be the New Meadows, ID area, or possibly near Boise ID; both Spokane, WA and Boise ID met data would be used for the modeling analysis. Emission rates were modeled to establish compliance with the primary and secondary emission standards for particulate matter with a nominal aerodynamic diameter less than or equal to 10 microns (PM_{10}), nitrogen oxides (NO_x), and sulfur dioxide (SO_2). For PM10, initial modeling results indicated that fugitive PM emissions could contribute to an exceedence of the PM ambient standard. To address this modeled result, controls were specified to be placed on the PM fugitive emissions sources – the conveyors, screens and material handling drop points. Controls for these sources were the minimization of the drop points for all mechanical and any operator-controlled (i.e., dropping material from a bucket loader) sources. The use of water sprays was considered for the conveyors, screens and material handling drop points, but rejected. The addition of water to the aggregate materials would require an increase in the amount of fossil fuel to be used in the dryer (and resulting increase in combustion emissions) and could also lower product quality. The use of minimized drop points to provide fugitive dust control from these points is an operating requirement (personal conversation, McCormick, R. CH2M HILL with Schilling, K .IDEQ).

Idaho toxic air pollutants (TAPs) were first screened against the hourly emission levels in IDAPA 58.01.01.585 and IDAPA 58.01.01.586. Through modeling, it was determined that the Boise MET data was limiting when compared to Spokane MET data modeling. Dispersion modeling was required for TAPs exceeding screening levels, which included acetaldehyde, benzene, , formaldehyde, methylene chloride, propionaldehyde, quinine, tetrachloroethylene, benzo(a)pyrene, polycyclic organic matter (POM), polyaromatic hydrocarbons (PAH), arsenic, beryllium, cadmium, chromium, hexavalent chromium, molybdenum, phosphorus, and Total TCDD. Modeling successfully demonstrated pre-construction compliance with Idaho TAPs, with the exception of the pollutants formaldehyde, POM, PAH, arsenic, and chromium. For these pollutants, CH2M HILL performed a Toxics Reasonable Available Control Technology (T-RACT) review as described in 58.01.01210. The T-RACT evaluations demonstrated that no waste oil that has not been processed as RFO is to be used, that additional controls are not reasonably available, and the current controls and operation constitute T-RACT. These T-RACT obligations are summarized in Section 5, above and in the T-RACT analysis in Appendix F.

Emissions estimates for TAPs are provided Appendix C.

The modeling results and T-RACT evaluations demonstrate compliance with the NAAQS and acceptable ambient concentrations for carcinogens per IDAPA 58.01.01.586. The modeling results memo is included in Appendix E. Electronic emission estimates and modeling files are included in the attached CD.

8.0 Applicable Requirements

8.1 Federal Requirements

A regulatory analysis was performed for the Knife River HMA facility to determine the applicability of the federal regulations in 40 CFR.

40 CFR Part 60 Subpart I – Standards of Performance for New Stationary Sources Hot Mix Asphalt Facilities. The facility is subject to the requirements of 40 CFR Part 60 Subpart I – Standards of Performance for New Stationary Sources Hot Mix Asphalt Facilities.

40 CFR 60 Subpart I will apply because this facility meets the applicability definitions in 40 CFR 60.90(a) and (b) and was constructed after June 11, 1973:

> *60.90(a) The affected facility to which the provisions of this subpart apply is each hot mix asphalt facility. For the purpose of this subpart, a hot mix asphalt facility is comprised only of any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler, systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems.*
>
> *60.90 (b) Any facility under paragraph (a) of this section that commences construction or modification after June 11, 1973, is subject to the requirements of this subpart.*

Under this subpart, the facility is restricted to discharge or cause the discharge in the atmosphere gases which:

- 60.92(a) (1) Contain particulate matter in excess of 90 mg/dscm (0.4 gr/dscf)
- 60.92(a) (2) Exhibit 20 percent opacity, or greater

40 CFR 279.11 Used Oil Fuel Specifications. Used oil fuel specifications shall not exceed any of the allowable levels for contaminants contained in Table 1 of this part with the exception of Total Halogens. Total Halogens shall not exceed 1,000 ppm.

40 CFR 761.20(3). Polychlorinated Biphenyls Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions.

Total PCB concentration in the re-processed fuel oil shall not exceed 2ppm. Knife River will include a specification and require analysis of any RFO purchases to demonstrate conformance with this limitation.

40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compressor Ignition Internal Combustion Engines (CI ICE).

NSPS Subpart IIII applies to stationary compression ignition internal combustion engines that are new, or modified such that they qualify as new sources after July 11, 2005. The rule covers stationary engines that are used in emergencies as well as for remote, auxiliary non-emergency purposes. The applicability provisions of Subpart IIII to owners or operators that:

- Commence construction (i.e. order the engine) after July 11, 2005 and the engine is manufactured after April 1, 2006 and is not a fire pump.

- Modify or reconstruct any stationary CI ICE after July 11, 2005. (Note these terms mean a change to any engine that causes an increase in the ability to emit any pollutant regulated under this subpart, or reconstruct an existing source such that the cost of the new components is greater than 50% of the cost of a comparable new unit).

The generators to be used at the portable Knife River plant are not subject to this NSPS. Generator 1, the small generator was manufactured in 2005, and Generator 2, the larger generator was manufactured in 1989.Both of these units predate the manufacture date of April 1, 2006. Neither generator has been modified as defined in Part 60.

40 CFR Part 60 Subpart OOO – Standards of Performance for New Stationary Sources for Nonmetallic Mineral Processing Plants.

The facility is not subject to the requirements of 40 CFR Part 60 Subpart OOO – Standards of Performance for New Stationary Sources for Nonmetallic Mineral Processing Plants because the Knife River Plant will contain a portable non-metallic mineral crusher less than 150 tons per hour.

40 CFR Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984.

The storage tanks at the facility are not subject to subpart Kb as the tanks are portable storage vessels, and/or do not meet the size vs. volatility criteria.

40 CFR Part 63 National Emissions Standards for Hazardous Air Pollutants are included in the State applicable regulatory review. The Knife River HMA plant is an area (minor) source for hazardous air pollutants.

8.2 State of Idaho Requirements

The following requirements apply under the IDAPA 58.01.01, *Rules for the Control of Air Pollution in Idaho.* Unless otherwise noted, "hot mix batch plant" means any provision applicable to the dryer, dryer burner coater, baghouse and stack, truck loading silo, bins, conveyors, screens, storage tanks, tank heater, and raw material piles.

IDAPA 58.01.01.130
STARTUP, SHUTDOWN, SCHEDULED MAINTENANCE, SAFETY MEASURES, UPSET AND BREAKDOWN.

1. Hot mix batch plant
2. Generators 1 and 2

If an excess emission event occurs during startup, shutdown, scheduled maintenance, safety measures, upset, or breakdown, Knife River will comply with IDAPA 58.01.01.130 through 58.01.01.136 by planning, identifying, operating, correcting, and notifying IDEQ of the event and as otherwise required by this section.

IDAPA 58.01.01.157
TEST METHODS AND PROCEDURES

1. Hot mix batch plant

If an emission test is required, Knife River will adhere to procedures outlined in IDAPA 58.01.01.157.

IDAPA 58.01.01.161

TOXIC SUBSTANCES

1. Hot mix batch plant
2. Generators 1 and 2

"Any contaminant which is by its nature toxic to human or animal life or vegetation shall not be emitted in such quantities or concentrations as to alone, or in combination with other contaminants, injure or unreasonably affect human or animal life or vegetation."

Toxic emissions have been reviewed for this project and are in compliance with this requirement. See emission estimates in Appendix C and modeling results in Appendix E.

IDAPA 58.01.01.200
PROCEDURES AND REQUIREMENTS FOR PERMITS TO CONSTRUCT

1. Hot mix batch plant
2. Generators 1 and 2

Upon Pre-Permit Construction approval by IDEQ, Knife River will follow the procedures and requirements outlined under IDAPA 58.01.01.200 for obtaining a Permit to Construct.

IDAPA 58.01.01.210
DEMONSTRATION OF PRECONSTRUCTION COMPLIANCE WITH TOXIC STANDARDS

1. Hot mix batch plant
2. Generators 1 and 2

"In accordance with Subsection 203.03, the applicant shall demonstrate preconstruction compliance with Section 161 to the satisfaction of the Department. The accuracy, completeness, execution, and results of the demonstration are all subject to review and approval by the Department."

Toxic emissions have been reviewed for this project and are in compliance with this requirement. See emission estimates in Appendix C and modeling results in Appendix E. T-RACT analysis has been included with this permit, additional T-RACT obligations may be applicable.

IDAPA 58.01.01.213
PRE-PERMIT CONSTRUCTION

1. Hot mix batch plant
2. Generators 1 and 2

Knife River will comply with procedures and regulations outlined in this section in order to obtain Pre-Permit Construction approval.

IDAPA 58.01.01.213.02. **Permit to Construct Procedures for Pre-Permit Construction**

IDAPA 58.01.01.213.02.a. Informational Meeting

"Within ten (10) days after the submittal of the pre-permit construction approval application, the owner or operator shall hold an informational meeting in at least one (1) location in the region in which the stationary source or facility is to be located. The informational meeting shall be made known by notice published at least ten (10) days before the meeting in a newspaper of general circulation in the county(ies) in which the stationary source or facility is to be located. A copy of such notice shall be included in the application."

A copy of the Legal Notice is provided in Appendix A.

IDAPA 58.01.01.500
REGISTRATION PROCEDURES AND REQUIREMENTS FOR PORTABLE EQUIPMENT

1. Hot mix batch plant

IDAPA 58.01.01.500.01 **Registration Requirements**

"All existing portable equipment shall be registered within ninety (90) days after the original effective date of this Section 500 and at least ten (10) days prior to relocating, using forms provided by the Department, except that no registration is required for mobile internal combustion engines, marine installations, and locomotives."

IDAPA 58.01.01.500.02 **Compliancé With Rules and Regulations**

"Possessing a "Certificate of Registration" does not relieve any owner or operator of the responsibility to comply with all applicable local, state and federal rules and regulations."

IDAPA 58.01.01.577
AMBIENT AIR QUALITY STANDARDS FOR SPECIFIC AIR POLLUTANTS (PM-10, SOx, NOx, CO, Pb)

1. Hot mix batch plant
2. Generators 1 and 2

IDAPA 58.01.01.577.01 **PM-10 Standards**

IDAPA 58.01.01.577.01.a Primary and Secondary Standards

IDAPA 58.01.01.577.01.a.i Annual Standard

"Fifty (50) micrograms per cubic meter, as an annual arithmetic mean -- never expected to be exceeded in any calendar year."

IDAPA 58.01.01.577.01.a.ii 24-hr Standard

"One hundred fifty (150) micrograms per cubic meter as a maximum twenty-four (24) hour concentration -- never expected to be exceeded more than once in any calendar year."

Knife River has demonstrated compliance with these requirements as part of this permit application process. See emission estimates in Appendix C and modeling results in Appendix E.

IDAPA 58.01.01.578
DESIGNATION OF ATTAINMENT, UNCLASSIFIABLE, AND NONATTAINMENT AREAS

1. Hot mix batch plant
2. Generators 1 and 2

The proposed site for the stationary sources is in an attainment area.

IDAPA 58.01.01.590
NEW SOURCE PERFORMANCE STANDARDS

The proposed Hot Mix Asphalt Plant is subject to NSPS 40 CFR Part 60 Subpart I – Standards of Performance for New Stationary Sources Hot Mix Asphalt Facilities.

40 CFR 60 Subpart I will apply because this facility meets the applicability definitions in 40 CFR 60.90(a) and (b) and was constructed after June 11, 1973:

> *60.90(a) The affected facility to which the provisions of this subpart apply is each hot mix asphalt facility. For the purpose of this subpart, a hot mix asphalt facility is comprised only of any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler, systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems.*
>
> *60.90 (b) Any facility under paragraph (a) of this section that commences construction or modification after June 11, 1973, is subject to the requirements of this subpart.*

Under this subpart, the facility is restricted to discharge or cause the discharge in the atmosphere gases which:

- 60.92(a) (1) Contain particulate matter in excess of 90 mg/dscm (0.4 gr/dscf)
- 60.92(a) (2) Exhibit 20 percent opacity, or greater

IDAPA 58.01.01.591

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

The proposed source is not regulated under 40 CFR Part 61 and 40 CFR Part 63 as it is an area source and not subject to the NESHAP provisions.

IDAPA 58.01.01.625
VISIBLE EMISSIONS

1. Hot mix batch plant
2. Generators 1 and 2

"A person shall not discharge any air pollutant into the atmosphere from any point of emission for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period which is greater than twenty percent (20%) opacity as determined by this section." Knife River shall demonstrate compliance with standard by operating the equipment as described in this application, and maintaining the emissions control equipment according to manufacturers' recommendations or site-specific good operating practices procedure.

Process weight 2,000,000 lb/hr or less has emission standard of 41.37 lb/hr for the entire source.

See emission estimates in Appendix C and modeling results in Appendix E.

IDAPA 58.01.01.775
RULES FOR CONTROL OF ODORS

Knife River will follow the guidelines set under IDAPA 58.01.01.775 through IDAPA 58.01.01.776 to control odorous emissions from all sources for which no gaseous emission control rules apply.

IDAPA 58.01.01.776
GENERAL RULES

IDAPA 58.01.01.776.01 General Restrictions

"No person shall allow, suffer, cause or permit the emission of odorous gases, liquids or solids into the atmosphere in such quantities as to cause air pollution."

Knife River will comply with odor requirements if it is determined that the HMA plant is the source of odor in quantities that constitute pollution as defined in IDAPA 58.01.01.

Figures

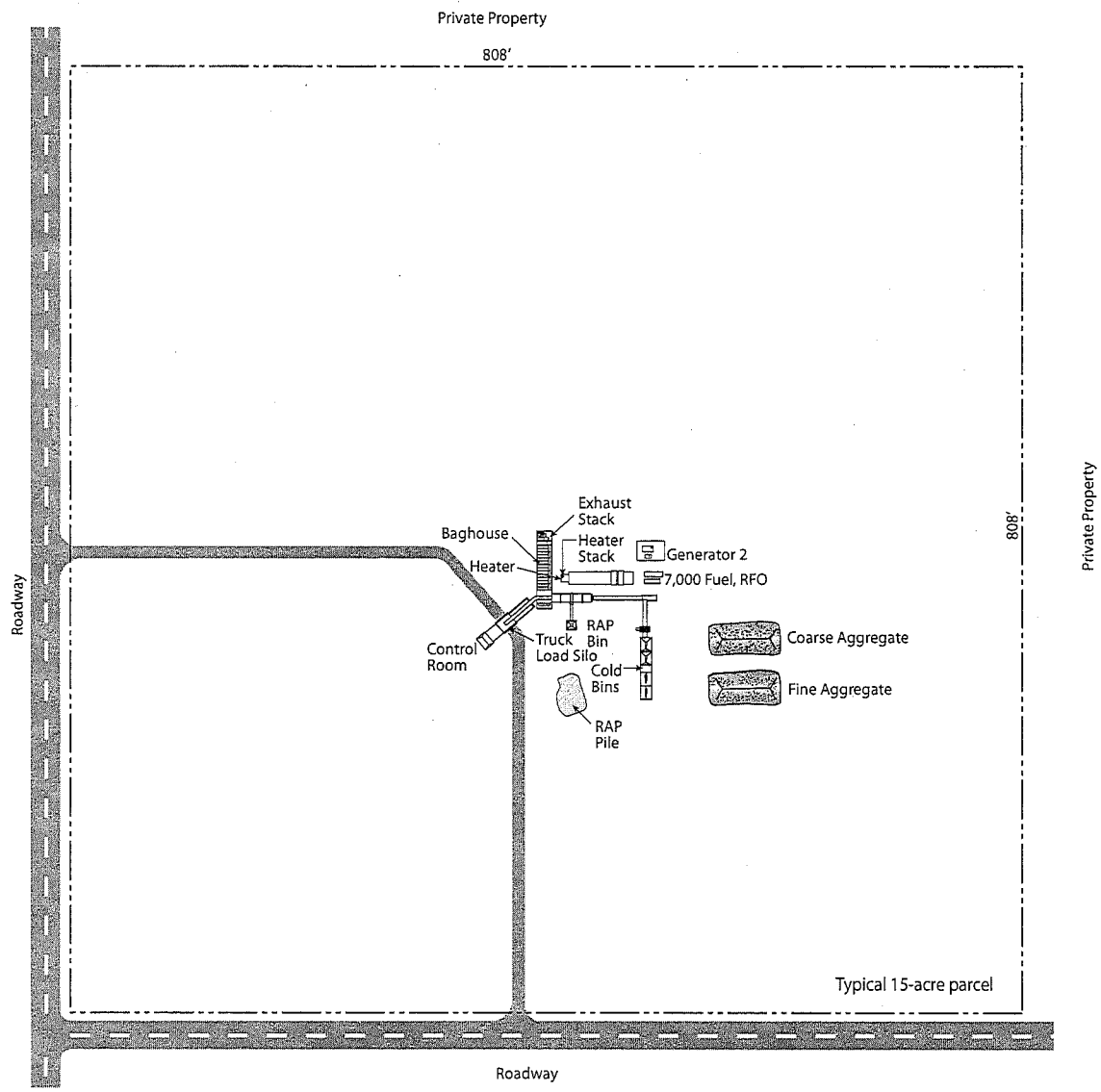


Figure 1
Typical Location – Scaled Plot Plan
IDAHO HOT MIX ASPHALT PLANT

ES122007002BDI

CH2MHILL

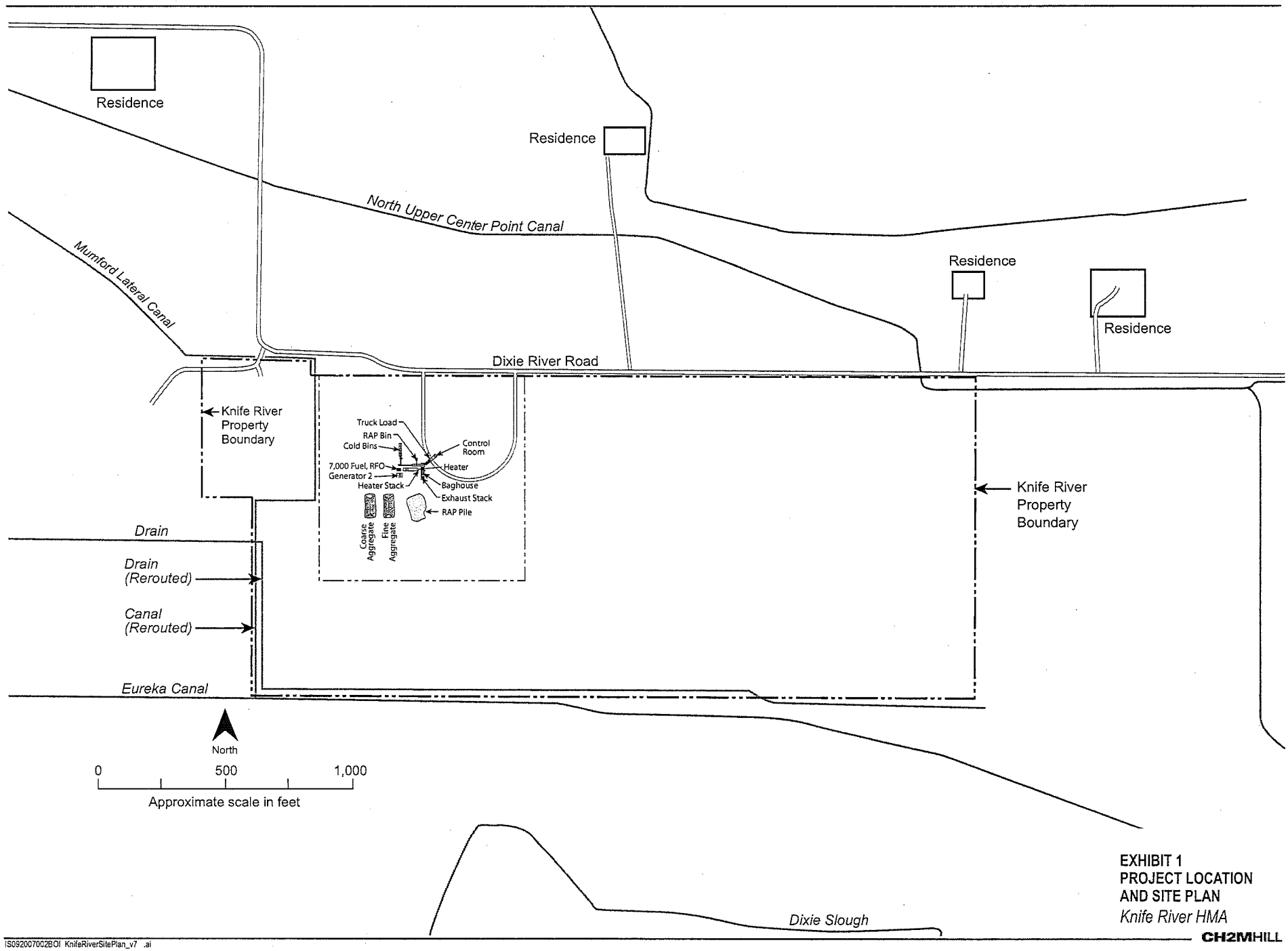


EXHIBIT 1
PROJECT LOCATION AND SITE PLAN
Knife River HMA

IS092007002BOI KnifeRiverSitePlan_v7 .ai

CH2MHILL

Appendix A

Public Meeting Announcement

Legals

Legal Notice
Knife River
Pre Permit Construction
Request

An informational meeting will be held in the Idaho Room at the Caldwell Public Library located at 1010 Dearborn Street in Caldwell, Idaho from 4 to 5 PM on Tuesday, March 4th, 2008. This meeting is in accordance with the Rules for the Control of Air Pollution in Idaho, Idaho Administrative Code, IDAPA 58.01.01.213.02 - Permit to Construct Procedures for Pre-Permit Construction.

The purpose of the meeting is to inform the general public of the request by Knife River, Inc. of Boise to install a portable hot mix asphalt plant on property it owns at 19543 Dixie River Road, Notus, Idaho. The hot mix asphalt plant will have a capacity of 280 tons per hour and an annual production of 325,000 tons. The Notus site will be at least 15 acres in size and will be used for the purpose of making hot mix asphalt. The hot mix plant will operate on electricity supplied by diesel powered generators located on site, or supplied from the grid. The aggregate dryer and plant heater will operate on natural gas, diesel, or refined used oil. Operation of the portable plant will commence in 2008 and is expected to operate for about 1 year or as production requirements dictate.

February 20, 2008 06556370

FAX

DATE: Thursday, February 21, 2008

TO: Alan Cawrse, CH2M Hill

FAX: 208 3455315

FROM: Legals

PAGES: 2

MEMO

Attached is a copy of the legal ad that ran in our Idaho Press Tribune newspaper yesterday, 02/20/08. It was run in the legal advertisment section.
Thank you,
Katherine Holmquist 465.8128

Appendix B

IDEQ PTC Application Forms

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 3
04/03/07

Please see instructions on page 2 before filling out the form.

DEQ USE ONLY
Date Received
Project Number
Payment / Fees Included? Yes ☐ No ☐
Check Number

COMPANY NAME, FACILITY NAME, AND FACILITY ID NUMBER

1. Company Name	Knife River, Inc		
2. Facility Name	Knife River Caldwell	3. Facility ID No.	
4. Brief Project Description - One sentence or less	Place a portable hot mix asphalt plant in Caldwell, Idaho		

PERMIT APPLICATION TYPE

5. ☒ New Facility ☐ New Source at Existing Facility ☐ Unpermitted Existing Source
☐ Modify Existing Source: Permit No.:____ Date Issued: ____
☐ Required by Enforcement Action: Case No.:____

6. ☒ Minor PTC ☐ Major PTC

FORMS INCLUDED

Included	N/A	Forms	DEQ Verify
☒	☐	Form GI – Facility Information	☐
☒	☐	Form EU0 – Emissions Units General	☐
☒	☐	Form EU1 - Industrial Engine Information Please Specify number of forms attached: _____	☐
☐	☒	Form EU2 - Nonmetallic Mineral Processing Plants Please Specify number of forms attached: _____	☐
☐	☒	Form EU3 - Spray Paint Booth Information Please Specify number of forms attached: _____	☐
☐	☒	Form EU4 - Cooling Tower Information Please Specify number of forms attached: _____	☐
☐	☒	Form EU5 – Boiler Information Please Specify number of forms attached: _____	☐
☒	☐	Form HMAP – Hot Mix Asphalt Plant Please Specify number of forms attached: _____	☐
☐	☒	Form CBP - Concrete Batch Plant Please Specify number of forms attached: _____	☐
☒	☐	Form BCE - Baghouses Control Equipment	☐
☐	☒	Form SCE - Scrubbers Control Equipment	☐
☒	☐	Forms EI-CP1 - EI-CP4 - Emissions Inventory– criteria pollutants (Excel workbook, all 4 worksheets)	☐
☒	☐	PP – Plot Plan	☐
☒	☐	Forms MI1 – MI4 – Modeling (Excel workbook, all 4 worksheets)	☐
☐	☒	Form FRA – Federal Regulation Applicability	☐

Instructions for Form CS

This form acts as a cover sheet for the Permit to Construct application, providing DEQ with basic information regarding the company and the proposed permitting action. This form helps DEQ efficiently determine whether the application is administratively complete. This form also provides the applicant with a list of forms available to aid the applicant to successfully submit a complete application.

Company Name, Facility Name, and Facility ID Number

1-3. Provide the name of your company, the name of the facility (if different than company name), and the facility identification (ID) number (Facility ID No.) in the boxes provided. The facility ID number is also known as the AIRS number or AIRS/AFS number (example: 095-00077). If you already have a permit, the facility ID number is located in the upper right hand corner of the cover page. The facility ID number must be provided unless your facility has not received one, in which case you may leave this box empty. **Use these same names and ID number on all forms**. This is useful in case any pages of the application are separated.

4. Provide a brief description of this permitting project in one sentence or less. Examples might be "Install/construct a new boiler" or "Increase the allowable process throughput." **This description will be used by DEQ as a unique identifier for this permitting project, in conjunction with the name(s) and ID number referenced in 1-3.** You will need to put this description, using the exact same words, on all other forms that are part of this project application. This is useful in case any pages of the application are separated.

Permit Application Type

5. Provide the reason you are submitting the permit application by checking the appropriate box (e.g., a new facility being constructed, a new source being constructed at an existing facility, an unpermitted existing source (as-built) applying for a permit for the first time, a permitted source to be modified, or the permit application is the result of an enforcement action, in which case provide the case number). If you are modifying an existing permitted source, provide the number and issue date of the most recent permit.

6. Indicate if the application is a minor permit to construct application or a major permit to construct application by checking the appropriate box (e.g., major PTC or minor PTC). If the permit to construct application is for a major new source or major modification, you must ensure that all necessary information required by IDAPA 58.01.01.202, and .204, or .205, as applicable, is provided.

Forms Included

Check the "Included" box for each form included in this permit to construct application. If there are multiples of a form for multiple units of that type, check the box and fill in the number of forms in the blank provided.

The "N/A" box should only be checked if the form is absolutely unnecessary to complete the application. Additional information may be requested.

When complete, submit all application forms and any required fees to:

Air Quality Program Office – Application Processing
Department of Environmental Quality
1410 N. Hilton
Boise, ID 83706-1255

General Information **Form GI**

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

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03/26/07

Please see instructions on page 2 before filling out the form.

All information is required. If information is missing, the application will not be processed.

IDENTIFICATION	
1. Company Name	Knife River, Inc.
2. Facility Name (if different than #1)	Knife River Caldwell
3. Facility I.D. No.	
4. Brief Project Description:	Place a portable hot mix asphalt plant in Caldwell, Idaho
FACILITY INFORMATION	
5. Owned/operated by: (√ if applicable)	☐ Federal government ☐ County government ☐ State government ☐ City government
6. Primary Facility Permit Contact Person/Title	Jim Trull, Coorporate Developement
7. Telephone Number and Email Address	Jim.Trull@kniferiver.com 208 362-6152
8. Alternate Facility Contact Person/Title	Zac O'Kelly, Operations Manager of Grading and Paving
9. Telephone Number and Email Address	Zac.Okelly@kniferiver.com 208 941-6805
10. Address to which permit should be sent	5450 W. Gowan Rd.,
11. City/State/Zip	Boise, ID 83709
12. Equipment Location Address (if different than #10)	19543 Dixie River Road
13. City/State/Zip	Caldwell, Idaho, 833607
14. Is the Equipment Portable?	☒ Yes ☐ No
15. SIC Code(s) and NAISC Code	Primary SIC: 2951 Secondary SIC (if any): NAICS: 324121
16. Brief Business Description and Principal Product	Placement of portable how mix asphalt plant in Caldwell, Idaho
17. Identify any adjacent or contiguous facility that this company owns and/or operates	NA
PERMIT APPLICATION TYPE	
18. Specify Reason for Application	☒ New Facility ☐ New Source at Existing Facility ☐ Unpermitted Existing Source ☐ Modify Existing Source: Permit No.:____ Date Issued: ____ ☐ Permit Revision ☐ Required by Enforcement Action: Case No.:
CERTIFICATION	
IN ACCORDANCE WITH IDAPA 58.01.01.123 (RULES FOR THE CONTROL OF AIR POLLUTION IN IDAHO), I CERTIFY BASED ON INFORMATION AND BELIEF FORMED AFTER REASONABLE INQUIRY, THE STATEMENTS AND INFORMATION IN THE DOCUMENT ARE TRUE, ACCURATE, AND COMPLETE.	
19. Responsible Official's Name/Title	Jim Trull, Coorporate Developement
20. RESPONSIBLE OFFICIAL SIGNATURE	Date: 3/26/08
21. ☒ Check here to indicate you would like to review a draft permit prior to final issuance.	

Instructions for Form GI

This form is used by DEQ to identify a company or facility, equipment locations, and personnel involved with the permit application. Additional information may be requested.

1 – 4. Please fill in the same company name, facility name (if different), facility ID number, and brief project description as on Form CS. This is useful in case any pages of the application are separated.

5. Indicate whether the facility is owned by a government entity.

6. Name of the primary person who should be contacted regarding this permit.

7. Telephone number and e-mail address of person listed in 6.

8. Name of the person who should be contacted if the person listed in 6 is not available.

9. Telephone number and e-mail address of person listed in 8.

10 - 11. Address to which DEQ should mail the permit.

12 - 13. Physical address at which the equipment is located (if different than 10).

14. If the equipment is portable (such as an asphalt plant), identify by marking "yes." If there are other locations where the portable equipment will be used, attach a Portable Equipment Relocation Form (PERF) to list those locations. An electronic copy of the PERF can be obtained from the DEQ website http://www.deq.idaho.gov/air/permits_forms/forms/ptc_relocation.pdf (or http://www.deq.idaho.gov/air/permits_forms/forms/ptc_relocation.doc for Word format). **Important note:** In addition to being submitted with this PTC application, a PERF must also be completed and filed at DEQ at least 10 days in advance of relocating any of the equipment covered in this application.

15. Provide the Standard Industrial Classification (SIC) code and the North American Industry Classification System (NAICS) code for your plant. NAICS codes can be found at http://www.census.gov/epcd/naics02/naicod02.htm. If a secondary SIC code is applicable, provide it also.

16. Briefly describe the primary activity and principal product of your business. If your plant includes more than one major activity, describe the one related with the permit application.

17. Please indicate if there are any other branches or divisions of this company located within 5 miles of the address provided in 12 above on this form.

18. Check the box which describes the type of permit application.

19 - 20. Fill in the certification section with a signature, name, title and date. The certification must be signed by a responsible official (as defined in IDAPA 58.01.01.006) in accordance with IDAPA 58.01.01.123.

21. If you would like to review a draft before the final permit is issued, check this box.

DEQ AIR QUALITY PROGRAM
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PERMIT TO CONSTRUCT APPLICATION

Revision 3
03/27/07

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

Company Name:	Facility Name:	Facility ID No:
Knife River, Inc	Knife River Caldwell	
Brief Project Description:	Place a portable hot mix asphalt plant in Caldwell, Idaho	

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

1. Emissions Unit (EU) Name:	HOT MIX ASPHALT PLANT
2. EU ID Number:	HMA01
3. EU Type:	☒ New Source ☐ Unpermitted Existing Source ☐ Modification to a Permitted Source -- Previous Permit #: Date Issued:
4. Manufacturer:	ASTEC INDUSTRIES, INC OR EQUIVALENT
5. Model:	PCF-1012-5
6. Maximum Capacity:	325 SHORT TONS PER HOUR
7. Date of Construction:	1985
8. Date of Modification (if any)	
9. Is this a Controlled Emission Unit?	☐ No ☒ Yes If Yes, complete the following section. If No, go to line 18.

EMISSIONS CONTROL EQUIPMENT

10. Control Equipment Name and ID:	HMA Dryer Baghouse, DRYBH		
11. Date of Installation:	March 1986	12. Date of Modification (if any):	
13. Manufacturer and Model Number:	ASTEC PBH50 or Equivalent		
14. ID(s) of Emission Unit Controlled:	DRYBH		
15. Is operating schedule different than emission units(s) involved?	☐ Yes ☒ No		
16. Does the manufacturer guarantee the control efficiency of the control equipment?	☐ Yes ☐ No (If Yes, attach and label manufacturer guarantee)		

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency	99.9	99.9				

17. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

18. Actual Operation	1161 HOURS/YEAR
19. Maximum Operation	8760 HOURS/YEAR

REQUESTED LIMITS

20. Are you requesting any permit limits?	☒ Yes ☐ No (If Yes, check all that apply below)
☐ Operation Hour Limit(s):	
☒ Production Limit(s):	280 TONS/HOUR
☐ Material Usage Limit(s):	
☐ Limits Based on Stack Testing	Please attach all relevant stack testing summary reports
☐ Other:	
21. Rationale for Requesting the Limit(s):	

Instructions for Form EU0

This form provides DEQ with information about an emissions unit. An emissions unit is the equipment or process that generates emissions of regulated air pollutant(s). This form is used by the permit writer to become familiar with the emissions unit (EU). This form is also used by DEQ to identify the control equipment and the emission point (stack or vent) used for the emission unit(s) proposed in this permit application. This form also asks for supporting documents to verify stated control efficiencies and details about the emission point. Additional information may be requested.

Please put the same company name, facility name (if different), facility ID number, and brief project description as on Form CS in the boxes provided. This is useful in case any pages of the application get separated.

1. Provide the name of the emissions unit (EU), such as "Union boiler," etc. Use the exact same name for this EU throughout all the application forms. A separate EU0 form is required for each emissions unit.

2. Provide the identification (ID) number of the EU. It can be any unique identifier you choose; however, this ID number should be unique to this EU and should be used consistently throughout this application and all other air quality permit applications (e.g., operating permit application) to identify this EU.

3. Indicate the type of EU by checking the appropriate box (e.g., a new source to be constructed, an unpermitted existing source (as-built) applying for the first time, or an existing permitted source to be modified). If the EU is being modified, indicate on the form the most recent permit issued for the EU.

4. Provide the manufacturer's name for the EU. If the EU is custom-designed or homemade, indicate so.

5. Provide the model number of the EU. If the EU is custom-designed or homemade, indicate so.

6. Provide the maximum capacity of the EU. For example, a boiler's capacity may be in MMBtu/hr in terms of heat input of natural gas; an assembly line capacity may be in parts produced per day. Capacity should be based on a rated nameplate or as stated in the manufacturer's literature.

7. The date of construction is the month, day, and year in which construction or modification was commenced.

   Definitions:

   Construction fabrication, erection, or installation of an affected facility.

   Commenced an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification.

   Modification any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted to the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) to the atmosphere not previously emitted.

8. If the EU has been or will be modified, provide the month, day, and year of the most recent or future modification as defined in IDAPA 58.01.01.006.55.

9. Indicate if emissions from the EU are controlled by air pollution control equipment. If the answer is yes, complete the next section. If the answer is no, go to line 18.

10. Provide the name of the air pollution control equipment (e.g., wet scrubber) and the control equipment's identification number. This identification number should be unique to this air pollution control equipment and should be used consistently throughout this and all other air quality permit applications (e.g., operating permit application) to identify this air pollution control equipment.

11. Provide the date the air pollution control equipment was installed.
12. If the air pollution control equipment has been modified, provide the date of the modification.
13. Provide the name of the manufacturer and the model number for the air pollution control equipment.
14. If this air pollution control equipment controls emissions from more than this EU, provide the identification number(s) of the other EU(s).
15. Indicate if this air pollution control equipment operates on a schedule different from the EU(s) it controls.
16. Indicate if the air pollution control manufacturer guarantees the control efficiency of the control equipment. If the answer is yes, attach the manufacturer's guarantee and label it with the air pollution control equipment identification number. Indicate the control efficiency for the target pollutant(s).
17. If the control efficiency of the air pollution control equipment is not guaranteed, attach the design specifications and any performance data to support the control efficiency stated in part 16. Label the supporting documentation with the air pollution control equipment identification number.
18. Provide the projected actual operating schedule for the emission unit in hours/day, hours/year, or other.
19. Provide the maximum operating schedule for the emission unit in hours/day, hours/year, or other.
20. If you are requesting to have limits placed on this EU, mark "Yes." Then, check the applicable requested limit(s) and provide the limit(s). For example, production limits may be in terms of parts produced per year, material usage limits may be in gallons per day.
21. Please provide the reason you are requesting limits, if any. This helps DEQ and the applicant determine whether the limits are necessary, and if they will accomplish the desired purpose. Provide supporting documentation (calculations, modeling assessment, regulatory review, etc.) for each limit requested.

Emissions Unit - General **Form EU0**

DEQ AIR QUALITY PROGRAM
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PERMIT TO CONSTRUCT APPLICATION

Revision 3
03/27/07

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

Company Name:	Facility Name:	Facility ID No:
Knife River, Inc	Knife River Caldwell	
Brief Project Description:	Place a portable hot mix asphalt plant in Caldwell, Idaho	

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

1. Emissions Unit (EU) Name:	HMA TANK HEATER
2. EU ID Number:	HEATER
3. EU Type:	☒ New Source ☐ Unpermitted Existing Source ☐ Modification to a Permitted Source -- Previous Permit #: Date Issued:
4. Manufacturer:	HEAT TEC POWER FLAME HEATER OR EQUIVALENT
5. Model:	SP-35
6. Maximum Capacity:	2.115 MM BTU/HR
7. Date of Construction:	1985
8. Date of Modification (if any)	NA
9. Is this a Controlled Emission Unit?	☒ No ☐ Yes If Yes, complete the following section. If No, go to line 18.

EMISSIONS CONTROL EQUIPMENT

10. Control Equipment Name and ID:			
11. Date of Installation:		12. Date of Modification (if any):	
13. Manufacturer and Model Number:			
14. ID(s) of Emission Unit Controlled:			
15. Is operating schedule different than emission units(s) involved?	☐ Yes ☒ No		
16. Does the manufacturer guarantee the control efficiency of the control equipment?	☐ Yes ☐ No (If Yes, attach and label manufacturer guarantee)		

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency						

17. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

18. Actual Operation	1161 HOURS/YEAR
19. Maximum Operation	8760 HOURS/YEAR

REQUESTED LIMITS

20. Are you requesting any permit limits?	☒ Yes ☐ No (If Yes, check all that apply below)
☐ Operation Hour Limit(s):	
☒ Production Limit(s):	280 TONS/HOUR
☐ Material Usage Limit(s):	
☐ Limits Based on Stack Testing	Please attach all relevant stack testing summary reports
☐ Other:	
21. Rationale for Requesting the Limit(s):	HOURLY PLANT PRODUCTION LIMIT

Instructions for Form EU0

This form provides DEQ with information about an emissions unit. An emissions unit is the equipment or process that generates emissions of regulated air pollutant(s). This form is used by the permit writer to become familiar with the emissions unit (EU). This form is also used by DEQ to identify the control equipment and the emission point (stack or vent) used for the emission unit(s) proposed in this permit application. This form also asks for supporting documents to verify stated control efficiencies and details about the emission point. Additional information may be requested.

Please put the same company name, facility name (if different), facility ID number, and brief project description as on Form CS in the boxes provided. This is useful in case any pages of the application get separated.

1. Provide the name of the emissions unit (EU), such as "Union boiler," etc. Use the exact same name for this EU throughout all the application forms. A separate EU0 form is required for each emissions unit.

2. Provide the identification (ID) number of the EU. It can be any unique identifier you choose; however, this ID number should be unique to this EU and should be used consistently throughout this application and all other air quality permit applications (e.g., operating permit application) to identify this EU.

3. Indicate the type of EU by checking the appropriate box (e.g., a new source to be constructed, an unpermitted existing source (as-built) applying for the first time, or an existing permitted source to be modified). If the EU is being modified, indicate on the form the most recent permit issued for the EU.

4. Provide the manufacturer's name for the EU. If the EU is custom-designed or homemade, indicate so.

5. Provide the model number of the EU. If the EU is custom-designed or homemade, indicate so.

6. Provide the maximum capacity of the EU. For example, a boiler's capacity may be in MMBtu/hr in terms of heat input of natural gas; an assembly line capacity may be in parts produced per day. Capacity should be based on a rated nameplate or as stated in the manufacturer's literature.

7. The date of construction is the month, day, and year in which construction or modification was commenced.

   Definitions:

   Construction fabrication, erection, or installation of an affected facility.

   Commenced an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification.

   Modification any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted to the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) to the atmosphere not previously emitted.

8. If the EU has been or will be modified, provide the month, day, and year of the most recent or future modification as defined in IDAPA 58.01.01.006.55.

9. Indicate if emissions from the EU are controlled by air pollution control equipment. If the answer is yes, complete the next section. If the answer is no, go to line 18.

10. Provide the name of the air pollution control equipment (e.g., wet scrubber) and the control equipment's identification number. This identification number should be unique to this air pollution control equipment and should be used consistently throughout this and all other air quality permit applications (e.g., operating permit application) to identify this air pollution control equipment.

11. Provide the date the air pollution control equipment was installed.
12. If the air pollution control equipment has been modified, provide the date of the modification.
13. Provide the name of the manufacturer and the model number for the air pollution control equipment.
14. If this air pollution control equipment controls emissions from more than this EU, provide the identification number(s) of the other EU(s).
15. Indicate if this air pollution control equipment operates on a schedule different from the EU(s) it controls.
16. Indicate if the air pollution control manufacturer guarantees the control efficiency of the control equipment. If the answer is yes, attach the manufacturer's guarantee and label it with the air pollution control equipment identification number. Indicate the control efficiency for the target pollutant(s).
17. If the control efficiency of the air pollution control equipment is not guaranteed, attach the design specifications and any performance data to support the control efficiency stated in part 16. Label the supporting documentation with the air pollution control equipment identification number.
18. Provide the projected actual operating schedule for the emission unit in hours/day, hours/year, or other.
19. Provide the maximum operating schedule for the emission unit in hours/day, hours/year, or other.
20. If you are requesting to have limits placed on this EU, mark "Yes." Then, check the applicable requested limit(s) and provide the limit(s). For example, production limits may be in terms of parts produced per year, material usage limits may be in gallons per day.
21. Please provide the reason you are requesting limits, if any. This helps DEQ and the applicant determine whether the limits are necessary, and if they will accomplish the desired purpose. Provide supporting documentation (calculations, modeling assessment, regulatory review, etc.) for each limit requested.

Emissions Units - Industrial Engine Information **Form EU1**

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1410 N. Hilton, Boise, ID 83706
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Air Permit Hotline – 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 3
03/27/07

Please see instructions on page 2 before filling out the form.

IDENTIFICATION		
Company Name: Knife River, Inc	Facility Name: Knife River Caldwell	Facility ID No:
Brief Project Description:	Place a portable hot mix asphalt plant in Caldwell, Idaho	

EXEMPTION

Please refer to IDAPA 58.01.01.222.01.c and d for a list of internal combustion engines that are exempt from the Permit to Construct requirements.

ENGINE (EMISSION UNIT) DESCRIPTION AND SPECIFICATIONS

1. Type of Unit: ☒ New Unit ☐ Unpermitted Existing Unit ☐ Modification to a Unit with Permit #: Date Issued:

2. Use of Engine: ☒ Normal Operation ☐ Emergency ☐ Back-up ☐ Other:

3. Engine ID Number:	4. Rated Power:	
GEN1	☒ 188 Brake Horsepower(bhp)	☐ Kilowatts(kW)

5. Construction Date:	6. Manufacturer:	7. Model:
2005	MultiQuip or Equivalent	MQ70/DCA70
8. Date of Modification (if applicable):	9. Serial Number (if available):	10. Control Device (if any):
	7300437	NA

FUEL DESCRIPTION AND SPECIFICATIONS

11. Fuel Type	☒ Diesel Fuel (#2) (gal/hr)	☐ Gasoline Fuel (gal/hr)	☐ Natural Gas (cf/hr)	☐ Other Fuels (unit:)
12. Full Load Consumption Rate	4.5			
13. Actual Consumption Rate	4.5			
14. Sulfur Content wt%	0.5	N/A	N/A	

OPERATING LIMITS & SCHEDULE

15. Imposed Operating Limits (hours/year, or gallons fuel/year, etc.):
2,322 hours/year

16. Operating Schedule (hours/day, months/year, etc.):
6 days/week, 12 months/year. Less usage during winter months when paving slows due to weather

Instructions for Form EU1

Please refer to IDAPA 58.01.01.222 for a list of internal combustion engines which are exempt from the Permit to Construct requirements.

Please fill in the same company name, facility name (if different), facility ID number, and brief project description as on Form CS. This is useful in case any pages of the application are separated.

Engine Description and Specification:

1. Indicate whether the unit is new, existing but unpermitted, or being modified.
2. Indicate the use of the engine.
3. Provide the identification (ID) number of the engine emission unit (EU). Each engine in the application must have its own number. If engines included in this permit application are not identical in make and model, fill out a separate EU1 form for each engine. If the engines are identical, attach a separate sheet labeled EU1A listing them by ID number and date of construction or modification. The ID number can be any unique identifier you choose; however, this ID number should be unique to this EU and should be used consistently throughout this application and all other air quality permit applications (e.g., operating permit application) to identify this EU.
4. The rated power should be read from the engine's nameplate or from the manufacturer's literature.
5. The date of construction of the emission unit is the date, month, and year in which construction or modification begins as defined in EU0 Form Instruction item 7.
6. Provide the name of the manufacturer of the emission unit.
7. Provide the model number of the engine. This number should be available from the nameplate of the engine.
8. If the engine has been or will be modified, give the date, month, and year of the most recent or future modification.
9. Provide the manufacturer's serial number for this engine, if available.
10. Provide the control device name and number if a control device is attached to this emission unit. The name and number of the control device should be consistent with control equipment forms and throughout the application.

Fuel Description and Specifications:

11. Indicate the fuel type used by the engine. If diesel fuel is used, you need to indicate the ranking number (e.g., diesel fuel No. 2). If the engine is a dual-fuel engine, please check the appropriate fuel type boxes.
12. The full-load consumption rate is the fuel consumption rate at the engine's rated capacity.
13. The actual consumption rate is the fuel consumption rate (usually daily average) under typical operational conditions.
14. Provide the weight percentage of the sulfur content in the diesel oil.

Operation Limits:

15. If any, indicate the operating limits you imposed to this unit in the units of operating hours per year, or gallons fuel per hour, per year, etc.
16. Indicate your operation schedule for the projected maximum operation of the engine.

Emissions Units - Industrial Engine Information **Form EU1**

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Revision 3
03/27/07

Please see instructions on page 2 before filling out the form.

IDENTIFICATION		
Company Name: Knife River, Inc	Facility Name: Knife River Caldwell	Facility ID No:
Brief Project Description:	Place a portable hot mix aspalt plant in Caldwell, Idaho	

EXEMPTION

Please refer to IDAPA 58.01.01.222.01.c and d for a list of internal combustion engines that are exempt from the Permit to Construct requirements.

ENGINE (EMISSION UNIT) DESCRIPTION AND SPECIFICATIONS

1. Type of Unit: ☒ New Unit ☐ Unpermitted Existing Unit ☐ Modification to a Unit with Permit #: Date Issued:

2. Use of Engine: ☒ Normal Operation ☐ Emergency ☐ Back-up ☐ Other:

3. Engine ID Number:	4. Rated Power:	
GEN2	☒ 1,125 Brake Horsepower(bhp)	☐ Kilowatts(kW)

5. Construction Date:	6. Manufacturer:	7. Model:
1989	Caterpillar or Equivalent	3412 Dita JWAC
8. Date of Modification (if applicable):	9. Serial Number (if available):	10. Control Device (if any):
	6FA06101	

FUEL DESCRIPTION AND SPECIFICATIONS

11. Fuel Type	☒ Diesel Fuel (#) (gal/hr)	☐ Gasoline Fuel (gal/hr)	☐ Natural Gas (cf/hr)	☐ Other Fuels (unit:)
12. Full Load Consumption Rate	27			
13. Actual Consumption Rate	27			
14. Sulfur Content wt%	0.5	N/A	N/A	

OPERATING LIMITS & SCHEDULE

15. Imposed Operating Limits (hours/year, or gallons fuel/year, etc.):
1,161 hours/year

16. Operating Schedule (hours/day, months/year, etc.):
6 days/week, 12 months/year, will operate less hours during winter months due to weather

Instructions for Form EU1

Please refer to IDAPA 58.01.01.222 for a list of internal combustion engines which are exempt from the Permit to Construct requirements.

Please fill in the same company name, facility name (if different), facility ID number, and brief project description as on Form CS. This is useful in case any pages of the application are separated.

Engine Description and Specification:

1. Indicate whether the unit is new, existing but unpermitted, or being modified.
2. Indicate the use of the engine.
3. Provide the identification (ID) number of the engine emission unit (EU). Each engine in the application must have its own number. If engines included in this permit application are not identical in make and model, fill out a separate EU1 form for each engine. If the engines are identical, attach a separate sheet labeled EU1A listing them by ID number and date of construction or modification. The ID number can be any unique identifier you choose; however, this ID number should be unique to this EU and should be used consistently throughout this application and all other air quality permit applications (e.g., operating permit application) to identify this EU.
4. The rated power should be read from the engine's nameplate or from the manufacturer's literature.
5. The date of construction of the emission unit is the date, month, and year in which construction or modification begins as defined in EU0 Form Instruction item 7.
6. Provide the name of the manufacturer of the emission unit.
7. Provide the model number of the engine. This number should be available from the nameplate of the engine.
8. If the engine has been or will be modified, give the date, month, and year of the most recent or future modification.
9. Provide the manufacturer's serial number for this engine, if available.
10. Provide the control device name and number if a control device is attached to this emission unit. The name and number of the control device should be consistent with control equipment forms and throughout the application.

Fuel Description and Specifications:

11. Indicate the fuel type used by the engine. If diesel fuel is used, you need to indicate the ranking number (e.g., diesel fuel No. 2). If the engine is a dual-fuel engine, please check the appropriate fuel type boxes.
12. The full-load consumption rate is the fuel consumption rate at the engine's rated capacity.
13. The actual consumption rate is the fuel consumption rate (usually daily average) under typical operational conditions.
14. Provide the weight percentage of the sulfur content in the diesel oil.

Operation Limits:

15. If any, indicate the operating limits you imposed to this unit in the units of operating hours per year, or gallons fuel per hour, per year, etc.
16. Indicate your operation schedule for the projected maximum operation of the engine.

Hot Mix Asphalt Plant **Form HMAP**

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 3
04/02/07

Please see instructions on page 4 before filling out the form.

GENERAL INFORMATION

Company Name:	Knife River, Inc		
Facility Name:	Knife River Caldwell	**Facility ID No:**	
Brief Project Description:	Placement of portable hot mix asphalt plant in Caldwell, Idaho		
Mailing Address:	5450 W. Gowen Rd		
City:	Boise	**State:**	ID
Zip Code:	83709	**County:**	Ada
General Nature of Business & Products:	Asphalt production		

Contact Name, Title:	Jim Trull, Coorporate Developement		
Phone:	208 362-6152	**Cell:**	028 941-0869
Email:	Jim.Trull@kniferiver.com		

Owner or Responsible Official Name, Title:	Jim Trull, Coorporate Developement
Phone:	208 362-6152
Email:	Jim.Trull@kniferiver.com

Proposed Initial Plant Location:	19543 Dixie River Road		
Nearest City:	Caldwell, Idaho	**Estimated Startup Date:**	6/2008
County:	Canyon		

Reason for Application:	☒ Permit to construct a new source ☐ Permit to operate an existing unpermitted source ☐ Permit to modify/revise an existing permitted source (identify the permit below) Permit No.: _____ Issue Date: _____ Facility ID: _____

☒ Check here to indicate you would like to review a draft permit prior to final issuance.

Comments:

Hot Mix Asphalt Plant **Form HMAP**

HOT-MIX ASPHALT PLANT INFORMATION

Manufacturer:	Astec or Equivalent	**Model:**	PCF-1012-5
Manufacture Date:	1985	**Type HMA Plant:**	☒ Drum Mix ☐ Batch Mix
Maximum Hourly Asphalt Production:	280 (tons/hour)		
Requested Annual Asphalt Production:	325,000 (tons/year)		
Burner Fuel Type:	Natural Gas, #2 fuel oil, RFO (natural gas, #2 fuel oil, used oil, etc.)		
Maximum Burner Fuel Usage Rate:	92.381 ☐ scf/hour or ☒ gallons/hour		
Type Air Pollution Control Device:	Baghouse (baghouse, scrubber, etc.)		
Control Device Manufacturer:	Astec or Equivalent	**Model:**	PBH50
Stack Parameters:	Stack Height from Ground (ft): 26.25	Stack Exhaust Flow Rate (acfm): 34549	
	Stack Inside Diameter (ft): 3.45	Stack Exhaust Gas Temperature (°F): 286	

ASPHALT TANK HEATER

Fuel Type:	Natural Gas, #2 fuel oil, RFO (natural gas, #2 fuel oil, used oil, etc.)	
Maximum Fuel Usage Rate:	15 (units/hour) (units/year) ☒ gallons ☐ ft^3 ☐ other:	
Type Air Pollution Control Device:	NA ☐ MMBtu ☐ HP	
Stack Parameters:	Stack Height from Ground (ft): 12.1	Stack Exhaust Flow Rate (acfm): 5028
	Stack Inside Diameter (ft): 0.5	Stack Exhaust Gas Temperature (°F): 286

Is this an NSPS-affected facility? ☒ Yes ☐ No

To determine if the HMA facility is a New Source Performance Standards (NSPS)-affected facility, consider the following:

Were any of the following constructed or modified after June 11, 1973, such that the equipment becomes an affected facility as defined in 40 Code of Federal Regulations, Part 60, Section 90 (40 CFR 60.90) *Standards of Performance for Hot-Mix Asphalt Facilities*:

- Dryers
- Systems for screening, handling, storing, and weighing of hot aggregate
- Systems for loading, transferring, and storing of mineral filler
- Systems for mixing hot-mix asphalt
- Leading, transfer, and storage systems associated with emission control systems

Modification is defined in 40 CFR 60.14. The Code of Federal Regulations can be accessed from the website http://www.gpoaccess.gov/cfr/.

Has a performance test been conducted in accordance with 40 CFR 60.93 that demonstrates particulate matter emissions are less than or equal to 0.04 gr/dscf (grains per dry standard cubic foot) at the HMA stack?

☒ Yes ☐ No

If Yes, state the date the test was conducted: 5/91.

Provide a copy of the performance test results with this application if you want DEQ to consider it in determining the frequency of performance testing requirements for your hot-mix asphalt plant.

Hot Mix Asphalt Plant **Form HMAP**

ELECTRICAL GENERATOR SET INFORMATION (If Applicable)

Manufacturer:	MultiQuip or Equivalent	**Model:**	MQ45
Maximum Rated Capacity:	125 ☐ Hp ☒ kW		
Fuel Type:	☐ Gasoline ☒ Diesel ☐ Natural Gas ☐ Propane		
Maximum Fuel Usage Rate:	4.5 ☒ gal./hr. ☐ cfh		
Maximum Daily Hrs. of Operations:	16 (hours/day)		
Maximum Annual Hrs. of Operations:	2322 (hours/year)		
Stack Parameters:	Stack Height from Ground (ft): 6.9	Stack Exhaust Flow Rate (acfm): 583	
	Stack Inside Diameter (ft): 0.33	Stack Exhaust Gas Temperature (°F): 649	

Manufacturer:	Caterpillar or Equivalent	**Model:**	3412 Dita JWAC
Maximum Rated Capacity:	750 ☐ Hp ☒ kW		
Fuel Type:	☐ Gasoline ☒ Diesel ☐ Natural Gas ☐ Propane		
Maximum Fuel Usage Rate:	27 ☒ gal./hr. ☐ cfh		
Maximum Daily Hrs. of Operations:	8 (hours/day)		
Maximum Annual Hrs. of Operations:	1161 (hours/year)		
Stack Parameters:	Stack Height from Ground (ft): 7.5	Stack Exhaust Flow Rate (acfm): 2246	
	Stack Inside Diameter (ft): 0.49	Stack Exhaust Gas Temperature (°F): 649	

☒ **$1,000 PTC application fee enclosed**

Certification of Truth, Accuracy, and Completeness (by Responsible Official)
I hereby certify that based on information and belief formed after reasonable inquiry, the statements and information contained in this and any attached and/or referenced document(s) are true, accurate, and complete in accordance with IDAPA 58.01.01.123-124.

Responsible Official Signature — Coorporate Development *Responsible Official Title* — 3/26/08 *Date*

JAMES M. TRULL
Print or Type Responsible Official Name

Instructions for Form HMAP

PTC APPLICATION OVERVIEW

This application is for the construction and operation of portable and stationary hot mix asphalt plants in all areas of Idaho except any nonattainment area. Nonattainment areas are identified on the DEQ website at http://www.deq.idaho.gov/air/data_reports/monitoring/overview.cfm#Idaho. If you are planning to locate in a nonattainment area, please call the Air Permit Hotline at 1-877-5PERMIT prior to submitting an application.

PTC APPLICATION INSTRUCTIONS

Please fill in the same company name, facility name (if different), facility ID number, and brief project description as on Form CS. This is useful if application pages are separated.

1. **Application.** Complete the attached PTC application.
2. **Portable Equipment Relocation Form.** Complete the Portable Equipment Relocation Form (PERF). An electronic copy of the PERF can be obtained from the DEQ website http://www.deq.idaho.gov/air/permits_forms/forms/ptc_relocation.pdf (or http://www.deq.idaho.gov/air/permits_forms/forms/ptc_relocation.doc for Word format). **Important note:** In addition to being submitted with this PTC application, a PERF must also be completed and filed at DEQ at least 10 days in advance of relocating any of the equipment covered in this application.
3. **Fees.** In accordance with the *Rules for the Control of Air Pollution in Idaho* (IDAPA 58.01.01.224 and .226), DEQ cannot process this application unless it is accompanied by a one thousand dollar ($1,000) application fee. If the purpose of this permit is to change the name or ownership of the holder of a PTC when DEQ determines no other review or analysis is required, the application fee is waived. The rules can be accessed at http://adm.idaho.gov/adminrules/rules/idapa58/0101.pdf.
4. **Mail.** Please mail the completed PTC application and PERF form – on CD if possible – and the $1,000 application fee to the address below. The processing of this PTC application cannot commence without payment.

Air Quality Program Office – Application Processing
Department of Environmental Quality
1410 North Hilton
Boise, ID 83706-1255

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 3
04/02/07

Please see instructions on page 2 before filling out the form.

IDENTIFICATION		
Company Name: Knife River, Inc.	**Facility Name:** Knife River Caldwell	**Facility ID No.:**
Brief Project Description:		

IDENTIFICATION				BAGHOUSE			BAGS			
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
Emission Unit	**EU ID No.**	**CE ID No.**	**Stack ID No.**	**Baghouse Manufacturer**	**Baghouse Model No.**	**Type**	**Type**	**Size (Dia x Ht)**	**No. of Bags**	**Air to Cloth**
HMA Dryer Baghouse	HMA01	HMA1	DRYB H	Astec or Equivalent	PBH50	Pulse Jet	Nomex	4.625 in x 8 ft	864	6/1

Instructions for Form BCE

This form is used by IDEQ to identify the baghouse control equipment in this permit application.

Please fill in the same company name, facility name (if different), facility ID number, and brief project description as on Form CS. This is useful in case any pages of the application are separated.

Provide the following:

1. The name of the emissions unit (EU), exactly the same as it appears on Form EU0.
2. The emissions unit ID No., exactly the same as it appears on Form EU0.
3. Control equipment ID No., exactly the same as it appears on Form EU0.
4. Stack ID No.
5. Name of the baghouse manufacturer.
6. Model number of the baghouse.
7. Type of baghouse (pulse jet, reverse air, etc.).
8. Type of bags (polyester, fiberglass, etc.).
9. Size and dimensions of the bags in feet.
10. Number of bags.
11. Air to cloth ratio.