

Air Quality

PERMIT TO CONSTRUCT

Permittee Knife River Corporation – Mountain West - 00514
Permit Number P-2011.0104
Project ID 62036
Facility ID 777-00514
Facility Location Portable throughout the State of Idaho

Permit Authority

This permit (a) is issued according to the “Rules for the Control of Air Pollution in Idaho” (Rules), IDAPA 58.01.01.200–228; (b) pertains only to emissions of air contaminants regulated by the State of Idaho and to the sources specifically allowed to be constructed or modified by this permit; (c) has been granted on the basis of design information presented with the application; (d) does not affect the title of the premises upon which the equipment is to be located; (e) does not release the permittee from any liability for any loss due to damage to person or property caused by, resulting from, or arising out of the design, installation, maintenance, or operation of the proposed equipment; (f) does not release the permittee from compliance with other applicable federal, state, tribal, or local laws, regulations, or ordinances; and (g) in no manner implies or suggests that the Idaho Department of Environmental Quality (DEQ) or its officers, agents, or employees assume any liability, directly or indirectly, for any loss due to damage to person or property caused by, resulting from, or arising out of design, installation, maintenance, or operation of the proposed equipment. Changes in design, equipment, or operations may be considered a modification subject to DEQ review in accordance with IDAPA 58.01.01.200–228.

Date Issued April 4, 2018


Kelli Wetzel, Permit Writer


Mike Simon, Stationary Source Manager

Contents

1	Permit Scope.....	3
2	Hot Mix Asphalt Plant.....	5
3	Compression Ignited Internal Combustion Engines.....	15
4	General Provisions.....	17

1 Permit Scope

Purpose

- 1.1 This is a revised permit to construct (PTC) for a hot mix asphalt plant facility to change the name from Knife River, Inc 777-00514 to Knife River Corporation – Mountain West – 00514.
- 1.2 This PTC replaces Permit to Construct No. P-2011.0104, issued on December 11, 2015.

Regulated Sources

Table 1.1 lists all sources of regulated emissions in this permit.

Table 1.1 Regulated Sources

Permit Section	Source	Control Equipment
2	<u>Hot Mix Asphalt Plant – Counter Flow Drum Dryer</u> Manufacturer: GENCOR Industries Model: 400 Ultra Plant Maximum Production: 400 T/hr, 500,000 T/yr Fuel Types: Natural Gas/Propane, #2 distillate fuel, Reprocessed fuel oil Maximum Heat Input: 135 MMBtu/hr Sulfur Content: 0.1%	Baghouse
3	<u>125 kW Generator Set</u> Engine Manufacturer: IVECO Motors Engine Model: NEF67 TE1X or equivalent ^a Manufactured Year: 1997 EPA Certification: Uncertified Displacement: 1.1 liters/cylinder Rated Power: 231 bhp (engine) Fuel Type: #2 Distillate Fuel Consumption Rate: 10.95 gal/hr Sulfur Content: 0.0015%	None
	<u>910 kW Generator Set</u> Engine Manufacturer: Caterpillar Engine Model: C32 or equivalent ^a Manufactured Year: 2006 EPA Certification: Tier 2 Displacement: 2.68 liters/cylinder Fuel Type: #2 Distillate Fuel Rated Power: 1,350 bhp (engine) Consumption Rate: 67 gal/hr Sulfur Content: 0.0015%	Diesel Oxidation Catalyst Muffler
	<u>Storage tanks</u> Model: above-ground storage tank Maximum capacity: 12,000 gallons Type: RFO Model: above-ground storage tank Maximum capacity: 10,000 gallons Type: Distillate Fuel	None
	<u>Materials transfer points</u> (includes fugitives) (4) bin aggregate feeders (1) bin RAP feeder Truck loading silo Screen Conveyors Aggregate dump to ground Aggregate dump to conveyor Aggregate conveyor to elevated storage	Reasonable control methods

a) "or equivalent" is defined as equipment which has an equivalent or less brake horsepower than listed in this table, which does not result in an increase in emissions, and which does not result in the emission of a toxic air pollutant not previously emitted.

2 Hot Mix Asphalt Plant

2.1 Process Description

A portable Hot Mix Asphalt (HMA) plant uses aggregate material that is mixed, heated and dried. The aggregate is then combined with liquid asphalt to create hot mix asphalt. This hot mix asphalt will be primarily used for road surfaces.

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 permitted here is a portable counter flow mix HMA plant.

The counter flow drum dryer design uses proportioning cold feed (aggregate) controls for the process materials. Sized aggregate is introduced to the counter flow drum at the opposing end to the burner. As the drum rotates, the aggregate and the combustion air move in opposing directions with the aggregate moving toward the burner. Recycled Asphalt Pavement (RAP) is introduced into the process at approximately the mid-point of the drum dryer. Drying of the materials takes place in the rotating, slightly declined, direct-fired drum dryer. During the drying process, the mixture is heated to temperatures around 325 °F and then coated with liquid asphalt cement. In this plant, the heated aggregate is coated with liquid asphalt cement at the end of the drum. Liquid asphalt cement flow is controlled by a variable flow pump that is electronically linked to the aggregate weigh scales. The resulting HMA is conveyed to an enclosed silo where it is loaded into trucks for transport to the work site.

The exhaust gases from the drum dryer are collected and ducted to a baghouse by an induced draft fan. Silo filling and conveyance from the drum dryer to the silo is an enclosed process with exhaust gases routed to the baghouse. Fine particulates collected by the baghouse are returned for blending with the aggregate and production of HMA.

The counter flow Knife River HMA plant will have a maximum production rate of 8,000 T/day and a maximum annual production rate of 500,000 T/yr.

2.2 Control Device Descriptions

Table 2.1 Hot Mix Asphalt Plant Description

Emissions Units / Processes	Control Devices	Emission Points
Hot Mix Asphalt Drum Dryer	Baghouse Covered conveyor Good combustion control Use of permitted fuels	Baghouse Stack
Materials Transfer	Reasonable Control	Fugitives

Emission Limits

2.3 Emission Limits

The emissions from the drum dryer stack shall not exceed any corresponding emissions rate limits listed in Table 2.2.

Table 2.2 Hot Mix Asphalt Plant Emission Limits

Source Description	PM _{2.5} ^(b)
	lb/hr ^(c)
HMA Drum Dryer	8.9

- a In absence of any other credible evidence, compliance is ensured by complying with permit operating, monitoring, and record keeping requirements.
- b Particulate matter with an aerodynamic diameter less than or equal to a nominal two point five (2.5) micrometers, including condensable particulate as defined in IDAPA 58.01.01.006.
- c Pounds per hour, as determined by a test method prescribed by IDAPA 58.01.01.157, EPA reference test method, continuous emission monitoring system (CEMS) data, or DEQ-approved alternative.

2.4 Opacity Limit

Emissions from any stack, vent, or functionally equivalent opening shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period as required by IDAPA 58.01.01.625. Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625.

2.5 40 CFR 60, Subpart I, Standard for Particulate Matter

The permittee shall comply with the applicable requirements of 40 CFR 60, Subpart I – Standards of Performance for Hot Mix Asphalt Facilities.

In accordance with 40 CFR 60.92, no owner or operator shall discharge or cause the discharge into the atmosphere from any HMA facility any gases which:

- Contain particulate matter in excess of 0.04 gr/dscf (90 mg/dscm), or
- Exhibit 20% opacity, or greater.

2.6 Odors

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 in accordance with IDAPA 58.01.01.776.01.

Operating Requirements

2.7 Asphalt Production Limits

To demonstrate compliance with the emissions limits, the production rate of asphalt shall not exceed any of the following limits:

- Daily asphalt production limits as specified in the Setback Distance Requirements permit condition.
- 500,000 tons per any consecutive 12-calendar month period.
- Recycled Asphalt Pavement (RAP) may be used at a rate of up to 50% of the total production.

2.8 Setback Distance Requirements

Setback distance is defined as the minimum distance from any emission stack to property boundary. On days when the two engines (231 and 1,350 bhp) are utilized to operate the HMA plant, the setback distance in any direction to the property boundary shall be greater than or equal to the following:

- When operating up to 5,000 tons/day - 590 feet ±6 feet.
- When operating between 5,001 tons/day and 8,000 tons/day - 722 feet ±6 feet.

On days when line power is utilized to operate the HMA plant, the setback distance in any direction to the property boundary shall be greater than or equal to the following:

- When operating up to 5,000 tons/day - 492 feet ±6 feet.
- When operating between 5,001 tons/day and 8,000 tons/day - 722 feet ±6 feet.

[12/11/2015]

2.9 Permitted Fuels

The HMA drum dryer shall only combust natural gas/propane, distillate fuel #2, or reprocessed fuel oil (RFO) as fuel.

2.10 Fuel Sulfur Content

No person shall sell, distribute, use, or make available for use any distillate fuel oil containing more than the following percentages of sulfur in accordance with IDAPA 58.01.01.725-728:

- ASTM Grade 1 fuel oil - 0.3% by weight.
- ASTM Grade 2 fuel oil - 0.5% by weight.

The permittee shall not use any RFO containing more than 0.1% sulfur by weight.

2.11 40 CFR 279, Subpart B, Used Oil Specifications

In accordance with 40 CFR 279.11, with the exception of total halogens which are limited to 1,000 ppm (or 4,000 ppm as noted below), used oil burned for energy recovery shall not exceed any of the allowable levels of the constituents and property listed in Table 4. In addition, used oil shall not contain quantifiable levels (2 ppm) of polychlorinated biphenyls (PCB).

Table 2.3 Used Oil Specifications^a

Constituent/Property	Allowable Level
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Flash point	100 deg. F minimum
Total halogens	1,000 or 4,000 ppm maximum ^b
PCBs ^c	< 2 ppm

- The specification does not apply to mixtures of used oil and hazardous waste that continue to be regulated as hazardous waste (see 40 CFR 279.10(b)).
- Used oil containing more than 1,000 parts per million (ppm) total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under § 279.10(b)(1). Such used oil is subject to subpart H of part 266 of this chapter rather than 40 CFR 279 when burned for energy recovery unless the presumption of mixing can be successfully rebutted (see § 279.11).
- Applicable standards for the burning of used oil containing PCB are imposed by 40 CFR 761.20(e).

2.12 Reasonable Control of Fugitive Emissions

All reasonable precautions shall be taken to prevent particulate matter from becoming airborne in accordance with IDAPA 58.01.01.650-651 and IDAPA 58.01.01.808. In determining what is reasonable, consideration will be given to factors such as the proximity of dust-emitting operations to human habitations and/or activities and atmospheric conditions that might affect the movement of PM. Some of the reasonable precautions include, but are not limited to, the following:

- Good operating practices, including water spraying or other suitable measures, shall be employed to prevent dust generation and atmospheric entrainment during operations such as stockpiling, screen changing and general maintenance.
- Use, where practical, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of lands.
- Application, where practical, of asphalt, oil, water, or suitable chemicals to, or covering of, dirt roads, material stockpiles, and other surfaces which can create dust.
- Installation and use, where practical, of hoods, fans, and fabric filters or equivalent systems to enclose and vent the handling of dusty materials. Adequate containment methods should be employed during sandblasting or other operations.
- Covering, where practical, of open-bodied trucks transporting materials likely to give rise to airborne dusts.
- Paving of roadways and their maintenance in a clean condition, where practical.
- Prompt removal of earth or other stored material from streets, where practical.
- No person shall cause, allow or permit a plant to operate that is not equipped with an efficient fugitive dust control system. The system shall be operated and maintained in such a manner as to satisfactorily control the emission of particulate material from any point other than the stack outlet.

2.13 Baghouse System Control Equipment

The permittee shall install and operate a baghouse to control PM, PM_{2.5} and PM₁₀ from the HMA Dryer and to ensure compliance with emission limits.

2.14 Baghouse Control Procedures

Within 60 days of permit issuance, the permittee shall have developed a Baghouse Filter System Procedures document for the inspection and operation of the baghouse filter system which controls particulate matter emissions from the asphalt dryer. The Baghouse Filter System Procedures document shall be a permittee-developed document independent of the manufacturer supplied operating manual but may include summaries of procedures included in the manufacturer supplied operating manual.

The Baghouse Filter System Procedures document shall describe the procedures that will be followed to comply with the maintenance General Provision and shall contain requirements for monthly see/no-see visible emissions inspections of the baghouse. The inspection shall occur during daylight hours and under normal operating conditions.

The Baghouse/Filter System Procedures document shall include a schedule and procedures for corrective action that will be taken if visible emissions are present from the asphalt dryer baghouse at any time. At a minimum the document shall include:

- Procedures to determine if bags or cartridges are ruptured; and
- Procedures to determine if bags or cartridges are not appropriately secured in place.

The permittee shall maintain records of the results of each baghouse filter system inspection. The records shall include a description of whether visible emissions were present and if visible emissions were present a description of the corrective action that was taken.

The Baghouse Filter System Procedures document shall be submitted to DEQ within 60 days after permit issuance and shall contain a certification by a responsible official. Any changes to the Baghouse Filter System Procedures document shall be submitted within 15 days of the change.

The Baghouse Filter System Procedures document shall remain on-site at all times and shall be made available to DEQ representatives upon request.

The operating and monitoring requirements specified in the Baghouse Filter System Procedures document are incorporated by reference to this permit and are enforceable permit conditions.

Monitoring and Recordkeeping Requirements

2.15 Fugitive Dust Monitoring

The permittee shall conduct a facility-wide inspection of potential sources of visible fugitive emissions during daylight hours and under normal operating conditions once each day that the asphalt plant operates, to demonstrate compliance with the Reasonable Control of Fugitive Emissions and the Fugitive Emissions Controls permit conditions. The inspection shall consist of a see/no see evaluation for each potential source of visible fugitive emissions. If any visible fugitive emissions are present from any source of fugitive emissions, the permittee shall take appropriate corrective action as expeditiously as practicable to mitigate the visible fugitive emissions.

The permittee shall maintain records of the results of each see/no see evaluation of visible fugitive emissions inspection. The records shall include, at a minimum, the date and results of each inspection and a description of the following: the permittee's assessment of the conditions existing at the time visible fugitive emissions are present (if observed), any corrective action taken in response to the visible fugitive emissions, and the date corrective action was taken.

2.16 Production Monitoring

- Each day that the HMA Dryer is operated, the permittee shall monitor and record the daily production to demonstrate compliance with the daily production limit.
- Each month the permittee shall monitor and record the monthly and annual production of the HMA Dryer to demonstrate compliance with the relevant annual production limit. Annual production shall be determined by summing each monthly production total over the previous consecutive 12-calendar month period.

- For each mix when RAP is used as part of the aggregate, the permittee shall monitor and record the tons of RAP used and the tons of aggregate mixed with RAP to demonstrate compliance with the RAP aggregate limit.

2.17 Setback Distance Monitoring

The permittee shall measure and record the distance, to an accuracy of plus or minus six feet, between the property line and the asphalt drum mixer baghouse exhaust stack each time the asphalt drum mixer baghouse is moved to demonstrate compliance with the Setback Distance Requirements permit condition. In addition, the permittee shall record whether the site has line power or is using the IC engines to generate power at the site.

2.18 Fuel Sulfur Content Monitoring

The permittee shall maintain documentation of supplier verification of fuel oil and used oil sulfur content on an as received basis.

2.19 Used Oil Certification

The permittee shall demonstrate compliance with the Used Oil Specifications permit condition by obtaining a used oil certification from the used oil fuel supplier on an as-received basis for each shipment or by having the fuel analyzed by a qualified laboratory. The certification shall include the following information:

- The name and address of the used oil supplier;
- The measured concentration, expressed as ppm, of each constituent listed in the used oil specifications Table;
- The flash point of the used oil expressed as degrees Fahrenheit;
- The analytical method or methods used to determine the concentration of each constituent and property (flash point) listed in the used oil specifications Table;
- The sulfur content in percent by weight
- The date and location of each sample; and
- The date of each certification analysis.

2.20 Odor Complaints

The permittee shall maintain records of all odor complaints received to demonstrate compliance with IDAPA 58.01.01.776.01. The permittee shall take appropriate corrective action as expeditiously as practicable. The records shall include, at a minimum, the date each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

Relocation, Co-location, and Nonattainment Area Operation

2.21 Relocation

At least 10 days prior to relocation of any sources listed in Table 1, the permittee shall submit a scaled plot plan and a complete Portable Equipment Relocation Form (PERF) in accordance with IDAPA 58.01.01.500, to the following address or fax number:

PERF Processing Unit
DEQ– Air Quality
1410 N. Hilton
Boise, ID 83706-1255
Phone: (208) 373-0502
Fax: (208) 373-0340

The scaled plot plan shall show the location of any emissions source listed in Table 1, and distances to any area outside of a building where the general public has access, including property boundaries.

Electronic copies of the PERF may be obtained from the DEQ web site.

2.22 Co-location

This facility may co locate with up to one (1) rock crushing facility that is permitted by rule (PBR) in accordance with IDAPA 58.01.01.500 and IDAPA 58.01.01.794.01.

With the exception of one (1) PBR rock crushing facility, the emission sources listed in Table 1.1 may not co locate with any other stationary source of emissions.

An emission source listed in Table 1.1 shall be defined as co-located:

- If the emission source is operating, and
- The distance between the emission source and another stationary source that is operating and not listed in Table 1 is less than 1,000 feet (305 meters).

To ensure compliance with this requirement, the permittee shall physically measure and record the minimum distance from each emission source listed in Table 1.1 to the nearest stationary source not listed in Table 1.1. This measurement shall be conducted and recorded each time the minimum setback distance changes or is required to be measured (as required by the Setback Distance Monitoring permit condition). Measurements greater than 1,100 feet may be recorded as >1,100 feet.

2.23 PM_{2.5}/PM₁₀ Nonattainment Area Operations

The permittee shall not relocate and operate any source listed in Table 1.1 in any PM_{2.5} or PM₁₀ nonattainment area.

The location and boundaries of nonattainment areas in Idaho may be found at the DEQ website or by contacting DEQ.

Performance Testing Requirements

2.24 PM_{2.5} and Particulate Matter Performance Testing

Performance testing on the asphalt drum mixer baghouse stack shall be performed within 180 days of permit issuance and no less than once every five years following the date of each test.

The performance test shall measure the PM_{2.5} emission rate in pounds per hour, PM emission rate in grains per dry standard cubic feet, and the opacity to demonstrate compliance with the Emissions Limits, 40 CFR 60, Subpart I – Standard for Particulate Matter, and Opacity Limit permit conditions.

The performance test shall be conducted under worst-case normal operating conditions and in accordance with IDAPA 58.01.01.157, and Performance Testing General Provision of this permit. The permittee is encouraged to submit a performance testing protocol for approval 30 days prior to conducting the performance tests.

2.25 PM_{2.5} and Particulate Matter Performance Testing Methods and Procedures

The permittee shall use EPA Method 5 to determine compliance with the 40 CFR 60, Subpart I – Standards for Particulate Matter permit condition.

To determine compliance with the PM_{2.5} Emissions Limit permit condition, the permittee shall use one of the following:

- The sum of EPA Methods 201A and 202 or;
- The sum of EPA Methods 5 and 202 (if these methods are used, all of the captured PM is assumed to be PM_{2.5}) or;
- Comparable and equivalent methods approved in accordance with Subsection 157.02.d.

The permittee shall use EPA Method 9 to determine compliance with the Opacity Limit permit condition in accordance with IDAPA 58.01.01.625.04.

2.26 Performance Test Monitoring

In addition to conducting the proper EPA test methods described in the PM_{2.5} and Particulate Matter Performance Testing Methods and Procedures permit condition, the permittee shall monitor and recorded the following during each performance test:

- The HMA production rate, in tons per hour, once every 15 minutes;
- The RAP usage, in tons per hour, once every 15 minutes;
- The type of fuel combusted in the HMA Dryer during the test;
- The sulfur content of the fuel combusted in the HMA Dryer during the test.

2.27 Performance Testing Recordkeeping and Reporting

Performance test reports shall include records of the required monitoring (the Performance Test Monitoring permit condition) and documentation that the performance test was conducted in accordance with periodic performance testing requirements (the PM_{2.5} and Particulate Matter Performance Testing permit condition). The permittee shall submit the performance test report to DEQ (the Performance Test Reporting permit condition) in accordance with the Performance Testing general provision.

- The permittee shall maintain a copy of the performance test results of the most recently conducted stack test on this HMA facility. This report shall be made available to DEQ representatives upon request.

Reporting Requirements

2.28 Performance Test Reporting

Performance test reports shall include records of the monitoring required by this permit during the test, and documentation that the performance test was conducted under worst-case normal operating conditions and in accordance with IDAPA 58.01.01.157. Performance test reports shall be submitted by the permittee to the following address:

Air Quality Permit Compliance
 Lewiston Regional Office
 Department of Environmental Quality
 1118 'F' Street
 Lewiston, ID 83501
 Phone: (208) 799-4370
 Fax: (208) 799-3451

2.29 NSPS 40 CFR 60, Subpart A – General Provisions

The permittee shall comply with the applicable requirements of 40 CFR 60, Subpart A – General Provisions in accordance with 40 CFR 60.1. A summary of requirements for affected facilities is provided in Table 2.4.

Table 2.4 NSPS 40 CFR 60 Subpart A – General Provisions

Section	Section Title	Summary of Section Requirements
60.4	Address	<ul style="list-style-type: none"> All notifications and reports shall be submitted to: Department of Environmental Quality Lewiston Regional Office 1118 F Street Lewiston, ID 83501
60.7(a),(b),(c), (d) and (f)	Notification and Record Keeping	<ul style="list-style-type: none"> Notification of physical or operational change that may increase emissions postmarked 60 days before the change is made. Maintain records of the occurrence and duration of any: startup, shutdown or malfunction of the affected source; malfunction of air pollution control device; and any period when a continuous monitoring system or monitoring device is inoperative. For affected units with continuous monitoring device requirements report excess emissions and monitoring system performance semiannually, postmarked by January 30th and July 30th (in the format required by NSPS). Maintain in a permanent form records suitable for inspection of all measurements, system testing, performance measurements, calibration checks, and adjustments/maintenance performed. Records shall be maintained for a period of two years from the date the record is required to be generated by the applicable regulation.
60.8	Performance Tests	<ul style="list-style-type: none"> The owner or operator shall provide notice at least 30 days prior to any performance test to afford an opportunity for an observer to be present during testing.
60.11(a),(b),(c), (d) and (g)	Compliance with Standards and Maintenance Requirements	<ul style="list-style-type: none"> Other than opacity standards, where performance tests are required compliance with standards is determined by methods and procedures established by 40 CFR 60.8. Compliance with NSPS opacity standards is determined by Method 9 of Appendix A. At all times, including periods of startup, shutdown, and malfunction to the extent practicable, the operator shall maintain and operate any affected facility and air pollution control equipment consistent with good air pollution control practices. For the purposes of determining compliance with standards any credible evidence may be used if the appropriate performance or compliance test procedure has been performed.
60.12	Circumvention	<ul style="list-style-type: none"> No owner or operator shall build, erect, install or use any article or method, including dilution, to conceal an emission which would otherwise constitute a violation.
60.14	Modification	<ul style="list-style-type: none"> Physical or operational changes to source types that are regulated by a NSPS which result in an increase in hourly emissions to which a standard applies is considered a modification (unless expressly exempted the NSPS). Modified sources become subject to the NSPS standards.

Incorporation of Federal Requirements by Reference

2.30 Incorporation of Federal Requirements by Reference

Unless expressly provided otherwise, any reference in this permit to any document identified in IDAPA 58.01.01.107.03 shall constitute the full incorporation into this permit for the purposes of the reference, including any notes and appendices therein. Documents include, but are not limited to:

- Standards of Performance of New Stationary Sources (NSPS), 40 CFR 60, including:
- Subpart I – Standards of Performance for Hot Mix Asphalt Plants

For permit conditions referencing or cited in accordance with any document incorporated by reference (including permit conditions identified as NSPS or NESHAP), should there be any conflict between the requirements of the permit condition and the requirements of the document, the requirements of the document shall govern, including any amendments to that regulation.

3 Compression Ignited Internal Combustion Engines

3.1 Process Description

The facility uses two compression ignited internal combustion engines as power sources. A 1,350 bhp IC engine is used to power a 910 kW generator set which is used for general operations when line power is not readily available. This unit is also equipped with an oxidation catalyst for better control of CO, VOC and PM₁₀ pollutants. A 231 bhp IC engine is used to power a 125 kW generator set which is also used during the night.

3.2 Control Device Descriptions

Table 3.1 IC Engines Description

Emissions Units / Processes	Control Devices	Emission Points
1,350 bhp IC engine	Diesel Oxidation Catalyst Use of permitted fuels	Engine Stack
231 bhp IC engine	Good combustion control Use of permitted fuels	Engine Stack

Operating Requirements

3.3 General Operation Hour Limits

Operation of the 1,350 bhp IC engine shall not exceed 20 hours per day and 2,000 hours per year.

Operation of the 231 bhp IC engine shall not exceed 1,800 hours per year.

3.4 Fuel Sulfur Content

Both IC engines shall only combust 0.0015% (15 ppm) sulfur by weight distillate fuel oil. The fuel must also contain a minimum cetane index of 40 or a maximum aromatic content of 35% by volume.

3.5 Permitted Fuel

The two internal combustion engines shall only combust #2 distillate fuel.

3.6 Diesel Oxidation Catalyst

The permittee shall install and operate a diesel oxidation catalyst associated with the 1,350 bhp IC engine to ensure compliance with VOC, CO and PM₁₀ emission limits. The catalyst must also maintain, at a minimum, the manufacturer's control efficiencies listed below:

- 20% for Particulate Matter PM/PM₁₀
- 41% for Carbon Monoxide
- 66% for Hydrocarbons (Volatile Organic Compounds)

3.7 Non-Road Engine Specifications

When the permittee utilizes non-road engines all shall be defined in accordance with 40 CFR 1068.30.

Monitoring and Recordkeeping Requirements

3.8 Engine Relocation Requirement

The Non-road engine(s) located and/or operating in conjunction with this asphalt production facility shall not remain at any one (1) location more than 12 consecutive months. Any engine that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the 12 consecutive month period.

3.9 IC Engines Operating Hours Monitoring

The permittee shall monitor and record:

- The hours of operation of the 1,350 bhp IC engine on a calendar day basis; and
- Each calendar month the hours of operation of each IC engine during previous consecutive 12-calendar month period.

3.10 Fuel Sulfur Content Monitoring

The permittee shall maintain documentation of supplier verification of fuel oil sulfur content on an as received basis.

3.11 Facility Relocation Monitoring

To demonstrate compliance with the relocation and non-road engine specifications requirements, the permittee shall notify DEQ using the Portable Equipment Relocation Form (PERF) each time this asphalt production facility is relocated to a new location.

4 General Provisions

General Compliance

4.1 The permittee has a continuing duty to comply with all terms and conditions of this permit. All emissions authorized herein shall be consistent with the terms and conditions of this permit and the "Rules for the Control of Air Pollution in Idaho." The emissions of any pollutant in excess of the limitations specified herein, or noncompliance with any other condition or limitation contained in this permit, shall constitute a violation of this permit, the "Rules for the Control of Air Pollution in Idaho," and the Environmental Protection and Health Act (Idaho Code §39-101, et seq.)

[Idaho Code §39-101, et seq.]

4.2 The permittee shall at all times (except as provided in the "Rules for the Control of Air Pollution in Idaho") maintain in good working order and operate as efficiently as practicable all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.

[IDAPA 58.01.01.211, 5/1/94]

4.3 Nothing in this permit is intended to relieve or exempt the permittee from the responsibility to comply with all applicable local, state, or federal statutes, rules, and regulations.

[IDAPA 58.01.01.212.01, 5/1/94]

Inspection and Entry

4.4 Upon presentation of credentials, the permittee shall allow DEQ or an authorized representative of DEQ to do the following:

- Enter upon the permittee's premises where an emissions source is located, emissions-related activity is conducted, or where records are kept under conditions of this permit;
- Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
- Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
- As authorized by the Idaho Environmental Protection and Health Act, sample or monitor, at reasonable times, substances or parameters for the purpose of determining or ensuring compliance with this permit or applicable requirements.

[Idaho Code §39-108]

Construction and Operation Notification

4.5 This permit shall expire if construction has not begun within two years of its issue date, or if construction is suspended for one year.

[IDAPA 58.01.01.211.02, 5/1/94]

4.6 The permittee shall furnish DEQ written notifications as follows:

- A notification of the date of initiation of construction, within five working days after occurrence; except in the case where pre-permit construction approval has been granted then notification shall be made within five working days after occurrence or within five working days after permit issuance whichever is later;

- A notification of the date of any suspension of construction, if such suspension lasts for one year or more;
- A notification of the anticipated date of initial start-up of the stationary source or facility not more than sixty days or less than thirty days prior to such date; and
- A notification of the actual date of initial start-up of the stationary source or facility within fifteen days after such date; and
- A notification of the initial date of achieving the maximum production rate, within five working days after occurrence - production rate and date.

[IDAPA 58.01.01.211.03, 5/1/94]

Performance Testing

- 4.7 If performance testing (air emissions source test) is required by this permit, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test date or shorter time period as approved by DEQ. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests that such testing not be performed on weekends or state holidays.
- 4.8 All performance testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior DEQ approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, at least 30 days prior to conducting any performance test, the permittee is encouraged to submit a performance test protocol to DEQ for approval. The written protocol shall include a description of the test method(s) to be used, an explanation of any or unusual circumstances regarding the proposed test, and the proposed test schedule for conducting and reporting the test.
- 4.9 Within 60 days following the date in which a performance test required by this permit is concluded, the permittee shall submit to DEQ a performance test report. The written report shall include a description of the process, identification of the test method(s) used, equipment used, all process operating data collected during the test period, and test results, as well as raw test data and associated documentation, including any approved test protocol.

[IDAPA 58.01.01.157, 4/5/00 and 4/11/15]

Monitoring and Recordkeeping

- 4.10 The permittee shall maintain sufficient records to ensure compliance with all of the terms and conditions of this permit. Monitoring records shall include, but not be limited to, the following: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to DEQ representatives upon request.

[IDAPA 58.01.01.211, 5/1/94]

Excess Emissions

- 4.11 The permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130–136 for excess emissions due to start-up, shut-down, scheduled maintenance, safety measures, upsets, and breakdowns.

[IDAPA 58.01.01.130–136, 4/5/00]

Certification

- 4.12 All documents submitted to DEQ—including, but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, or compliance certification—shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

[IDAPA 58.01.01.123, 5/1/94]

False Statements

- 4.13 No person shall knowingly make any false statement, representation, or certification in any form, notice, or report required under this permit or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.125, 3/23/98]

Tampering

- 4.14 No person shall knowingly render inaccurate any monitoring device or method required under this permit or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.126, 3/23/98]

Transferability

- 4.15 This permit is transferable in accordance with procedures listed in IDAPA 58.01.01.209.06.

[IDAPA 58.01.01.209.06, 4/11/06]

Severability

- 4.16 The provisions of this permit are severable, and if any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

[IDAPA 58.01.01.211, 5/1/94]