

## Air Quality

### PERMIT TO CONSTRUCT


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**Permittee** Knife River Corporation - Mountain West - 00434  
**Permit Number** P-2019.0021  
**Project ID** 62221  
**Facility ID** 777-00434  
**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** June 25, 2019



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## Contents

1	Permit Scope.....	3
2	Facility-Wide Conditions .....	4
3	Concrete Batch Plant Equipment.....	7
4	General Provisions.....	10

# 1 Permit Scope

## Purpose

1.1 This is the initial permit to construct (PTC) for a portable concrete batch plant facility.

## 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>Material Transfer Points:</u> Materials handling Concrete aggregate transfers Truck unloading of aggregate Aggregate conveyor transfers Aggregate handling	Fugitive emissions control as specified in the permit
3	<u>Concrete Batch Plant – Truck Mix</u> Manufacturer: Helco Model: MO-4507 Manufacture Date: unknown Rated production: 60 yd <sup>3</sup> /hr, Throughput limits: 900 yd <sup>3</sup> /day and 180,000 yd <sup>3</sup> /yr  <u>Cement Storage Silo</u> Storage capacity: 52 yd <sup>3</sup>  <u>Fly Ash Storage Silo</u> Storage capacity: 40 yd <sup>3</sup>  <u>Product Truck Load-out</u>	<u>Cement Storage Silo Bin Vent Filter/Baghouse</u> <sup>a</sup> : Manufacturer: Belgrade Steel Tank Co or equivalent <sup>b</sup> Model: Belle 225 Dust House or equivalent <sup>b</sup> PM <sub>10</sub> /PM <sub>2.5</sub> control efficiency: 99%  <u>Fly Ash Storage Silo Bin Vent Filter/Baghouse</u> <sup>a</sup> : Manufacturer: Belgrade Steel Tank Co or equivalent <sup>b</sup> Model: Belle 150 Dust House or equivalent <sup>b</sup> PM <sub>10</sub> /PM <sub>2.5</sub> control efficiency: 99%  <u>Truck Load-out Baghouse</u> Manufacturer: Stephens or equivalent <sup>b</sup> Model: SP-380 or equivalent <sup>b</sup> PM <sub>10</sub> /PM <sub>2.5</sub> control efficiency: 99%  <u>Material Transfer Points:</u> Control: water sprays PM <sub>10</sub> /PM <sub>2.5</sub> control efficiency: 75%
	<u>Boiler:</u> Manufacturer: Sioux Model: HM1.7G Manufacture Date: 1/3/2019 Heat input rating: 1.7 MMBtu/hr Fuel: natural gas	N/A

- a) Both the cement storage silo baghouse and fly ash storage silo baghouse is considered process equipment, and therefore the PM<sub>10</sub> emission factors with the baghouses control were used when determining potential to emit and for modeling purposes.
- b) Equivalent means that the baghouse with different manufacturer, or different model shall provide the same level of control with the minimum control efficiency of 99%

## **2 Facility-Wide Conditions**

### **Fugitive Dust Control**

#### **2.1 Reasonable Control of Fugitive Emissions**

In accordance with IDAPA 58.01.01.650-651, all reasonable precautions shall be taken to prevent particulate matter from becoming airborne.

The permittee shall monitor and maintain records of the frequency and the method(s) used (e.g., water, chemical dust suppressants) to reasonably control fugitive dust emissions.

The permittee shall maintain records of all fugitive dust complaints received. The permittee shall take appropriate corrective action as expeditiously as practicable after receipt of a valid complaint. The records shall include, at a minimum, the date that 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.

The permittee shall conduct a daily facility-wide inspection of potential sources of fugitive dust emissions, during daylight hours and under normal operating conditions to ensure that the methods used to reasonably control fugitive dust emissions are effective. If fugitive dust emissions are not being reasonably controlled, the permittee shall take corrective action as expeditiously as practicable. The permittee shall maintain records of the results of each fugitive dust emissions inspection. The records shall include, at a minimum, the date of each inspection and a description of the following: the permittee's assessment of the conditions existing at the time fugitive emissions were present (if observed), any corrective action taken in response to the fugitive dust emissions, and the date the corrective action was taken.

#### **2.2 Fugitive Emissions Controls**

In accordance with IDAPA 58.01.01.650 and 651, the concrete batch plant shall employ efficient fugitive dust controls. The Permittee shall implement and maintain, but are not limited to, the following controls:

- Application, where practical, of water, or suitable chemicals to, or the covering of, dirt roads, material stockpiles, and other surfaces which can create dust. This fugitive dust control is employed at this facility and the Permittee shall be able to demonstrate this to DEQ staff.
- Installation and use, where practical, of hoods, fans, and fabric filters systems to enclose the handling of dusty materials. This fugitive dust control is employed at this facility and the Permittee shall be able to demonstrate this to DEQ staff.

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. The Permittee shall be able to demonstrate this to DEQ staff.

### **Relocation Requirements**

#### **2.3 Collocation Restrictions**

This concrete batch plant shall not locate within 1,000 feet ( $\pm$  6 feet) of a rock crushing plant or a concrete batch plant.

## **2.4 Relocation Requirements**

In accordance with IDAPA 58.01.01.500, at least 10 days prior to relocating any of the permitted equipment, the permittee shall submit a completed DEQ Portable Equipment Relocation Form (PERF) to the following address or fax number:

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

## **Non-attainment Area Operations**

### **2.5 Non-attainment Area Operations**

The facility may operate in nonattainment areas unless the specific State Implementation Plan (SIP) prohibits such operation.

## **Odors**

### **2.6 Odors**

The permittee shall not 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.

## **Monitoring and Recordkeeping Requirements**

### **2.7 Fugitive Dust Monitoring and Recordkeeping**

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 concrete batch 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.

### **2.8 Relocation Demonstration Recordkeeping**

To demonstrate compliance with the relocation requirement, the permittee shall record the date and location each time the concrete batch plant is relocated to a different aggregate pit or storage area.

**2.9 Odor Complaints**

The permittee shall maintain records of all odor complaints received to demonstrate compliance with the Odors permit condition. 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.

**2.10 Recordkeeping**

All monitoring and recordkeeping documentation required by this permit shall be maintained in accordance with the Recordkeeping general provision.

### 3 Concrete Batch Plant Equipment

#### 3.1 Process Description

The facility is a portable truck mix concrete batch plant consisting of aggregate stockpiles, a cement storage silo, a cement supplement (fly ash) storage silo, a weigh batcher, and conveyors. The facility combines aggregate, sand, fly ash, and cement and then transfers the mixture into a truck along with a measured amount of water for in-transit mixing of the concrete. Power will be supplied to the facility by using line power.

#### 3.2 Control Device Descriptions

Table 3.1 Concrete Batch Plant Description

Emissions Units / Processes	Control Devices	Emission Points
Cement storage silo	Baghouse <sup>(a)</sup>	Baghouse exhaust
Cement supplement storage silo fly ash	Baghouse <sup>(a)</sup>	Baghouse exhaust
Weigh batcher	Water spray bar around feed boot	
Truck loadout	Baghouse	Baghouse exhaust
Material transfer points (fugitive)	Water spray	
Natural gas-fired boiler	N/A	Boiler exhaust

a) As discussed previously, the baghouses are considered process equipment.

### Emission Limits

#### 3.3 Emission Limits

The emissions from the concrete batch plant and boiler stacks shall not exceed any emissions rate limit in the following table.

Table 3.2 Concrete Batch Plant Emission Limits

Source Description	PM <sub>2.5</sub> <sup>(b)</sup>		PM <sub>10</sub> <sup>(b)</sup>		SO <sub>2</sub>		NO <sub>x</sub>		CO		VOC	
	lb/hr <sup>(c)</sup>	T/yr <sup>(d)</sup>	lb/hr <sup>(c)</sup>	T/yr <sup>(d)</sup>	lb/hr <sup>(c)</sup>	T/yr <sup>(d)</sup>	lb/hr <sup>(c)</sup>	T/yr <sup>(d)</sup>	lb/hr <sup>(c)</sup>	T/yr <sup>(d)</sup>	lb/hr <sup>(c)</sup>	T/yr <sup>(d)</sup>
Concrete batch plant	0.032	0.076	0.08	0.18	NA	NA	NA	NA	NA	NA	NA	NA
Boiler	0.013	0.055	0.013	0.055	1.00E-03	4.38E-03	0.167	0.73	0.140	0.61	0.009	0.04

- 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 ten (10) micrometers and two point five (2.5) micrometers, including condensable particulate as defined in IDAPA 58.01.01.006. Note: PM<sub>10</sub>/PM<sub>2.5</sub> is a 24 hr daily average calculation.
- 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.
- d) Tons per any consecutive 12-calendar month period.

#### 3.4 Opacity Limit

Emissions from the concrete batch plant baghouse and boiler stacks, or any other stack, vent, or functionally equivalent opening associated with the concrete batch plant baghouse and boiler, 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.

## **Operating Requirements**

### **3.5 Concrete Production Limits**

Concrete production from this facility shall not exceed the following limits:

- 900 cubic yards per day
- 180,000 cubic yards per consecutive 12-month

### **3.6 Weigh Batcher Water Spray Bar Control Equipment**

The permittee shall install, operate, and maintain a water spray bar around the feed boot to control emissions from the weigh batcher.

### **3.7 Baghouse System Control Equipment**

The permittee shall install, operate, and maintain a baghouse to control emissions from the truck loadout operation.

### **3.8 Fly Ash Storage Silo Baghouse Control Equipment**

The permittee shall install, operate, and maintain a baghouse filter at the fly ash storage silo to control emissions from silo operation.

### **3.9 Industry Specific Water Sprays Control Equipment**

The permittee shall install, operate, and maintain industry specific water sprays on material transfer points to control fugitive emissions.

### **3.10 Boiler Fuel Specification**

The boiler shall only combust natural gas.

## **Monitoring and Recordkeeping Requirements**

### **3.11 Concrete Production Recordkeeping**

For each day that the concrete batch plant is operated, the Permittee shall maintain the following records:

- The amount of concrete produced in cubic yards per day to demonstrate compliance with the Concrete Production Limits permit condition.

Monthly concrete production shall be determined by summing daily production over the previous calendar month. Consecutive 12-month of concrete production shall be determined by summing the monthly production over the previous consecutive 12-month period to demonstrate compliance with the consecutive 12-month Concrete Production Limits permit condition.

### **3.12 Baghouse/Filter System Procedures**

Within 60 days of initial start-up, 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 truck loadout operation. 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 General Compliance General Provisions 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 truck loadout operation 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, but not be limited to, the following:

- Date and time of inspection;
- Equipment inspected (e.g. exterior housing of baghouse, fan motor, auger, inlet air ducting);
- Description of whether visible emissions were present, and if visible emissions were present a description of the corrective action that was taken; and
- Date corrective action was taken.

The Baghouse Filter System Procedures document shall be submitted to DEQ within 60 days of initial start-up 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, monitoring, and recordkeeping requirements specified in the Baghouse Filter System Procedures document are incorporated by reference into this permit and are enforceable permit conditions.

### **3.13 Recordkeeping**

All monitoring and recordkeeping documentation required by this permit shall be maintained in accordance with the Recordkeeping general provision.

## 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; and
- A notification of the initial date of achieving the maximum production rate, within five working days after occurrence - production rate and date.

[IDAPA 58.01.01.211.01, 5/1/94]

- 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.

[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]