



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502
www.deq.idaho.gov

Governor Brad Little
Director John H. Tippetts

June 14, 2019

Joseph Smith,
Regional Environmental Manager
Knife River Corporation – Mountain West - 00386
4800 Wilkie Road
Missoula, MT 59808

RE: Facility ID No. 777 - 00386, Knife River Corporation – Mountain West - 00386, Boise; Final Permit Letter

Dear Mr. Smith:

The Department of Environmental Quality (DEQ) is issuing Permit to Construct (PTC) No. P-2009.0071 Project 62220 to Knife River Corporation – Mountain West - 00386 located at Boise for the addition of a fly ash silo. This PTC is issued in accordance with IDAPA 58.01.01.200 through 228 (Rules for the Control of Air Pollution in Idaho) and is based on the certified information provided in your PTC application received April 17, 2019.

This permit is effective immediately and replaces PTC No P-2009.0071, issued on November 21, 2018. This permit does not release Knife River Corporation – Mountain West from compliance with all other applicable federal, state, or local laws, regulations, permits, or ordinances.

Pursuant to the Construction and Operation Notification General Provision of your permit, it is required that construction and operation notification be provided. Please provide this information as listed to DEQ's Boise Regional Office, 1445 N. Orchard St., Boise, ID 83706, Fax (208) 373-0287.

In order to fully understand the compliance requirements of this permit, DEQ highly recommends that you schedule a meeting with Dave Luft, Air Quality Manager, at 208-373-0201 to review and discuss the terms and conditions of this permit. Should you choose to schedule this meeting, DEQ recommends that the following representatives attend the meeting: your facility's plant manager, responsible official, environmental contact, and any other staff responsible for day-to-day compliance with permit conditions.

Pursuant to IDAPA 58.01.23, you, as well as any other entity, may have the right to appeal this final agency action within 35 days of the date of this decision. However, prior to filing a petition for a contested case, I encourage you to contact Dan Pitman at (208) 373-0502 or daniel.pitman@deq.idaho.gov to address any questions or concerns you may have with the enclosed permit.

Sincerely,

A handwritten signature in black ink, appearing to read "Dan Pitman".

for, Mike Simon
Stationary Source Program Manager
Air Quality Division

MSDP
Permit No. P-2009.0071 PROJ 62220
Enclosures

Air Quality

PERMIT TO CONSTRUCT

Permittee Knife River Corporation – Mountain West - 00386
Permit Number P-2009.0071
Project ID 62220
Facility ID 777-00386
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 14, 2019



Dan Pitman, PE , Permit Writer



for Mike Simon, Stationary Source Manager

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1 Permit Scope

Purpose

- 1.1 This is a permit to construct (PTC) modification for a portable concrete batch plant facility to add a fly ash silo.
- 1.2 This PTC replaces Permit to Construct No. P-2009.0071 issued on November 21, 2018.

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 | <p><u>Concrete batch plant</u> Manufacturer: CON-E-CO, or equivalent Model: LO-PRO-12, or equivalent Maximum production rate: 300 cubic yards of concrete per hour</p> <p>The plant has the following major components:</p> <ul style="list-style-type: none"> • Cement I storage Silo with total storage of 860 cubic feet and PJC-300S silo dust control system • Cement II mobile storage silo with total storage of 1,900 cubic feet and PJC-300S silo dust control system • Fly ash storage silo with less than or equal to 110 cubic yard capacity and rated flow less than or equal to 1,600 acfm • 12-cubic yard cement batcher with BV-14 batcher dust control system • Four-compartment aggregate bin • 12-cubic yard aggregate batcher • (PIG) Cement horizontal silo and PJC-300S silo dust control system Manufacturer: Troxell Company Inc. Capacity: 180 tons SN No.: 1T95556187R719464 <p><u>2.8 MMBtu/hr natural gas hot water heater (uncontrolled)</u></p> | <p><u>Cement I mobile storage Silo dust control system/baghouse</u> Manufacturer: CON-E-CO, or equivalent Model: PJC-300S silo dust control system/baghouse, or equivalent Max. exit flow rate: 1,500 cfm for cement, or 1,000 cfm for fly ash Control efficiency: 99.9% for PM₁₀</p> <p><u>Cement II mobile storage silo dust control system/baghouse</u> Manufacturer: CON-E-CO, or equivalent Model: PJC-300S silo dust control system/baghouse, or equivalent Max. exit flow rate: 1,500 cfm for cement, or 1,000 cfm for fly ash Control efficiency: 99.9% for PM₁₀</p> <p>(PIG) Cement Horizontal Silo dust control system/baghouse Manufacturer: CON-E-CO, or equivalent Model: PJC-300S silo dust control system/baghouse, or equivalent Max. exit flow rate: 1,500 cfm for cement, or 1,000 cfm for fly ash Control efficiency: 99.9% for PM₁₀</p> <p><u>Fly Ash Silo</u> Manufacturer: Belgrade Steel Tank Co. or equivalent (e.g. any manufacturer with less than or equal to 110 cubic yard capacity and rated flow less than or equal to 1,600 acfm) Model: 330 Pulse Jet Capacity: 110 cubic yard Rated Flow: 1,600 acfm Control efficiency: 99.9% for PM₁₀</p> <p><u>Cement batcher dust control system/baghouse</u> Manufacturer: CON-E-CO, or equivalent Model: BV-14 batcher dust control system/baghouse, or equivalent Max. exit flow rate: 180 cfm Control efficiency: 99.9% for PM₁₀</p> <p><u>Truck mix loading dust control system/baghouse</u> Manufacturer: CON-E-CO, or equivalent Model: PJ-980 dust control system/baghouse, or equivalent Blower Capacity/max. exit flow rate: 5880 cfm Control efficiency: 99.9% for PM₁₀</p> |

[6/14/19]

2 Concrete Batch Plant

2.1 Process Description

The portable concrete batch plant is comprised of one portable PIG horizontal cement silo, two cement storage silos used as an additional storage, , one fly ash storage silo, one 12-cubic yard cement batcher, a four-compartment overhead aggregate bin, one 12-cubic yard aggregate batcher, conveyors, and 2.8 MMBtu/hr natural gas hot water heater. The plant combines sand, gravel, cement, fly ash, and water to produce concrete. Electricity of the plant is supplied by the local electric utility.

[6/14/19]

2.2 Control Device Descriptions

PM₁₀ emissions from the cement silo, the fly ash silo, the cement weigh batcher, and from truck mix loading are each controlled by a baghouse. The emissions point for each baghouse is listed in Table 2.1.

Table 2.1 Concrete Batch Plant Description

| Emissions Units / Processes | Control Devices | Emission Points |
|---|--|------------------|
| (PIG) Horizontal cement silo | PJC-300S silo dust control system/baghouse | Baghouse exhaust |
| Cement I storage Silo (PIG) Horizontal cement silo | PJC-300S silo dust control system/baghouse | Baghouse exhaust |
| Cement II Mobile storage silo | PJC-300S silo dust control system/baghouse | Baghouse exhaust |
| Fly Ash storage silo | Belle 330 Pulse Jet Baghouse | Baghouse Exhaust |
| Cement batcher | BV-14 batcher dust control system/baghouse | Baghouse exhaust |
| Truck mix loading | PJ-980 dust control system/baghouse | Baghouse exhaust |
| 2.8 MMBtu/hr natural gas hot water heater | none | Heater exhaust |

[6/14/19]

Emission Limits

2.3 Emission Limits

The PM₁₀, arsenic, and nickel emissions shall not exceed any emissions rate limit listed in Table 2.2.

Table 2.2 Baghouses Emission Limits^(a)

| Source Description | PM ₁₀ ^(b) | Arsenic | Nickel |
|--|---------------------------------|----------|----------|
| | lb/day | lb/yr | lb/yr |
| Cement I storage bin baghouse | 0.50 | 1.08E-03 | 1.14E-02 |
| Cement II Mobile storage silo baghouse | 0.50 | 9.59E-02 | 2.19E-01 |
| Fly Ash Silo | 1.29 | 1.31E-02 | 3.00E-2 |
| Cement batcher baghouse | 0.29 | -- | -- |
| Truck mix loading baghouse | 28.7 | 1.28E-01 | 5.03E-01 |

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, including condensable particulate as defined in IDAPA 58.01.01.006.

[6/14/19]

2.4 PM Emissions Limit from the Natural Gas-fired Hot Water Heater

The permittee shall not discharge particulate matter (PM) to the atmosphere from any fuel-burning equipment in excess of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume for gas as required by IDAPA 58.01.01.675.

[11/21/2018]

2.5 Opacity Limit

Emissions from the dust collection system stack, or any other stack, vent, or functionally equivalent opening associated with the portable concrete batch plant, 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

2.6 Concrete Production Limit

- The concrete production rate shall not exceed 7,200 cubic yards per day.
- The concrete production rate shall not exceed 360,000 cubic yards per any consecutive 12-calendar month period.

[6/14/19]

2.7 Operations and Maintenance (O&M) Manual

The permittee shall maintain and implement an O&M manual for the dust collectors which controls the particulate matter (PM) and PM₁₀ emissions from the plant (i.e. cement silo, fly ash silo, the PIG cement horizontal silo, cement weigh batcher, and truck mix loading). The O&M manual shall describe the procedures that will be followed to comply with General Provision 3.2 and the manufacturer specifications for the dust collectors. The manual shall contain, at a minimum, requirements for monthly inspections of the dust collectors during each month of operation. The inspections shall include, but not be limited to, checking pressure drop of the baghouses. The permittee shall operate the dust collectors in accordance with the O&M manual. The manual shall remain on site at all times and shall be made available to DEQ representatives upon request.

2.8 Fugitive Dust Control Strategies

The permittee shall immediately implement a strategy or strategies to control fugitive dust emissions whenever:

- Visible fugitive emissions are greater than 20% from any transfer point. For the purposes of this permit condition, transfer points include, but are not limited to, the following: transfer of sand and aggregate to respective weight bins/hoppers or storage bins/hoppers; transfer of sand and aggregate from respective weight bins/hoppers or storage bins/hoppers to a conveyor; transfer of sand and aggregate from a conveyor to the mix truck; transfer of cement and cement supplement, if applicable from the storage silo(s) to the mix truck.

Transfer point control strategies include, but are not limited to, the following: limit drop heights such that there is a homogeneous flow of material; install, operate, and maintain water spray bars to control fugitive dust emissions at transfer points on conveyors.

- Visible fugitive emissions from wind erosion on stockpiles exceed 20% opacity for a period or periods aggregating more than one minute in any 60-minute period.

Stockpile wind erosion control strategies include, but are not limited to, the following: limit the height of the stockpiles; limit the disturbance of stockpiles; and apply water or a chemical dust suppressant onto the surface of the stockpile.

- Visible fugitive emissions from vehicle traffic on any paved or unpaved roads within the facility boundary of the concrete batch plant exceeds 20% opacity for a period or periods aggregating more than one minute in any 60-minute period.
- Visible fugitive emissions control strategies for vehicle traffic on paved and unpaved roads within the facility boundary include, but are not limited to, the following: limit vehicle traffic; limit vehicle speed; apply water or a chemical dust suppressant to the surface of the road; apply gravel to the surface of unpaved roads; and sweep or use water sprays to clean the surface of a paved road.

2.9 Reasonable Control of Fugitive Emissions

All reasonable precautions shall be taken to prevent PM from becoming airborne in accordance with IDAPA 58.01.01.650-651. 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:

- 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, 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.

2.10 Hot Water Heater Fuel Type

The hot water heater shall exclusively combust natural gas.

[11/21/2018]

Monitoring and Recordkeeping Requirements

2.11 Concrete Production Monitoring

The permittee shall monitor and record the concrete production daily (when the facility is operated that day), monthly (when the facility is operated that month), and annually to demonstrate compliance with Permit Condition 2.6. Annual production shall be determined by summing each monthly production total over the previous consecutive 12-month period.

2.12 Visible Emissions/ Opacity Monitoring

During any month that the facility is operated, the permittee shall conduct a monthly facility-wide inspection of potential sources of visible emissions, including the stack and the vent of the dust

collectors/baghouses, during daylight hours and under normal operating conditions. The inspection shall consist of a see/no see evaluation for each potential source of visible emissions. If any visible emissions are present from any point of emission, the permittee shall either take appropriate corrective action as expeditiously as practicable, or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in accordance with IDAPA 58.01.01.130-136. The permittee shall maintain records of the results of each visible emission inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

2.13 Reasonable Control Measures

The permittee shall conduct a monthly facility-wide inspection of potential sources of fugitive emissions, during daylight hours and under normal operating conditions to ensure that the methods used to reasonably control fugitive emissions are effective. If fugitive 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 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 emissions, and the date the corrective action was taken.

2.14 Baghouse Monthly Inspection

The permittee shall maintain records of the results of each baghouse/filter system inspections in accordance with General Provision 3.10. 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.

Nonattainment Area

2.15 Nonattainment Area Operations

The permittee shall not move and operate any equipment authorized by this permit to any air quality non-attainment area in the State of Idaho.

Reporting Requirements

2.16 Relocation

At least 10 days prior to relocation of any equipment covered by this permit, 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
Ph.: (208) 373-0502
Fax: (208) 373-0340

3 General Provisions

General Compliance

3.1 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.]

3.2 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]

3.3 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

3.4 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

3.5 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]

3.6 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

3.7 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.

3.8 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.

3.9 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 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

3.10 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

- 3.11 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

- 3.12 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

- 3.13 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

- 3.14 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

- 3.15 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

- 3.16 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]