



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502

C.L. "Butch" Otter, Governor
Curt Fransen, Director

June 19, 2014

James Samuelson, Director, Engineering & Optimization
JR Simplot Co. -EMT
1130 Hwy. 30 W.
Pocatello, ID 83204-7510

RE: Facility ID No. 005-00088, JR Simplot Co. -EMT, Pocatello
Final Permit Letter

Dear Mr. Samuelson:

The Department of Environmental Quality (DEQ) is issuing Permit to Construct (PTC) No. P-2013.0041 Project 61326 to JR Simplot Co. -EMT located at Pocatello for a Permit to Construct (PTC) modification to include the removal of sulfur from phosphogypsum and increase annual hours of operation. 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 February 14, 2014.

This permit is effective immediately and replaces PTC No. P-2013.0041, issued on December 2, 2013. This permit does not release JR Simplot Co. -EMT 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 Pocatello Regional Office, 444 Hospital Way, #300, Pocatello, ID 83201, Fax (208) 236-6168.

In order to fully understand the compliance requirements of this permit, DEQ highly recommends that you schedule a meeting with Rick Elkins, Air Quality Analyst, at (208) 236-6160 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 Darrin Pampaian at (208) 373-0502 or darrin.pampaian@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 "Mike Simon".

Mike Simon
Stationary Source Program Manager
Air Quality Division

MS\drp

Permit No. P-2013.0041 PROJ 61326

Enclosures

AIR QUALITY

PERMIT TO CONSTRUCT

Permittee J R Simplot Co. - EMT
Permit Number P-2013.0041
Project ID 61326
Facility ID 005-00088
Facility Location 1130 Highway 30 West
Pocatello, ID 83204

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 19, 2014



Darrin Pampaian, PE, Permit Writer



Mike Simon, Stationary Source Manager

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1 Permit Scope

Purpose

- 1.1 This is a modified Permit to Construct for a previously permitted bench top kiln used to test the feasibility of beneficiation phosphate ore. This permit modification is to also allow the kiln to test the feasibility of removing sulfur from phosphogypsum.
- 1.2 Those permit conditions that have been modified or revised by this permitting action are identified by the permit issue date citation located directly under the permit condition and on the right-hand margin.
- 1.3 This PTC replaces Permit to Construct No. P-2013.0041 issued on December 2, 2013.

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>Bench Scale Kiln:</u> Manufacturer: Quinn Process Equipment Co. Model No.: QPEC 6" Laboratory Rotary Bench Kiln Max process rate: 23 lb/batch Process proposed rate: 9 lb/batch Stack temperature: 90-120 °F	<u>Kiln Baghouse:</u> Manufacturer: Camfil Model No.: GS4M Maximum air flow rate: 1,000 cfm Process flow rate: 100 cfm Bubbler water pH: 7 or greater when processing phosphogypsum Stack temperature: 90-120 °F

2 Kiln

Process Description

2.1 Process Description

A 6-inch bench scale rotary kiln is used to study the thermal beneficiation of phosphate ore and recovering sulfur from phosphogypsum.

A batch quantity of phosphate ore or phosphogypsum is placed in the rotary kiln. The material is roasted at various temperatures and durations to determine the optimal evolution of volatile constituents. There is no positive air draw on the kiln, as it does not have an internal blower. Off-gas will be collected and controlled with a baghouse. Dilution air is necessary in the off-gas to reduce the gas stream temperature to ensure it does not melt the ductwork routing it to the baghouse. The kiln does not have any combustion sources as the heat required by the kiln to operate is supplied by electricity.

[6/19/2014]

2.2 Control Device Descriptions

Table 2.1 Kiln Description

Emissions Units / Processes	Control Devices	Emission Points
Kiln	Baghouse, venting to bubblers when processing phosphogypsum	Baghouse stack

Emission Limits

2.3 Control Device Descriptions

Emissions from the baghouse stack, or any other stack, vent, or functionally equivalent opening associated with the ore beneficiation, 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.

[12/2/2013]

Operating Requirements

2.4 Annual Throughput Limit

Kiln throughput shall not exceed the following limits:

- 2.8 tons of phosphate ore per year, based on a calendar year
- 2.6 tons of phosphogypsum per year, based on a calendar year

[6/19/2014]

2.5 Annual Operations Limit

The permittee shall limit the operational time of the kiln to 1,200 hours per year when beneficiating phosphate ore, and 1,300 hours per year when beneficiating phosphogypsum, based on a calendar year.

[6/19/2014]

2.6 Baghouse Operation

- The baghouse shall be operating anytime the kiln is beneficiating phosphate ore or recovering sulfur from phosphogypsum.
- The permittee shall operate the baghouse in accordance with manufacturer's recommendations.
- The exhaust stream from the baghouse shall pass through the bubbler water when recovering sulfur from phosphogypsum.
- When recovering sulfur from phosphogypsum the bubbler water shall be maintained at a pH of 7 or greater.

[6/19/2014]

2.7 Phosphogypsum Removal and Distribution Requirements

In accordance with 40 CFR 61.205 (a), Phosphogypsum may be lawfully removed from a stack and distributed in commerce for use in indoor research and development activities, provided that it is accompanied at all times by certification documents which conform to the requirements of §61.208 (as specified below). In addition, before distributing phosphogypsum to any person for use in indoor research and development activities, the owner or operator of a phosphogypsum stack shall obtain from that person written confirmation that the research facility will comply with all of the limitations set forth in paragraph (b) of this section.

[6/19/2014]

2.8 Phosphogypsum Indoor Research and Development Requirements

In accordance with 40 CFR 61.205 (b) and (c), any person who purchases and uses phosphogypsum for indoor research and development purposes shall comply with all of the following limitations. Any use of phosphogypsum for indoor research and development purposes not consistent with the limitations set forth in this section shall be construed as unauthorized distribution of phosphogypsum.

- Each quantity of phosphogypsum purchased by a facility for a particular research and development activity shall be accompanied by certification documents which conform to the requirements of §61.208 (as specified in the Phosphogypsum Certification Requirements and Phosphogypsum Resale or Transfer Requirements Permit Conditions).
- No facility shall purchase or possess more than 3,182 kg (7,000 lb) of phosphogypsum for a particular indoor research and development activity. The total quantity of all phosphogypsum at a facility, as determined by summing the individual quantities purchased or possessed for each individual research and development activity conducted by that facility, may exceed 3,182 kg (7,000 lb), provided that no single room in which research and development activities are conducted shall contain more than 3,182 kg (7,000 lb).
- Containers of phosphogypsum used in indoor research and development activities shall be labeled with the following warning: **“Caution: Phosphogypsum Contains Elevated Levels of Naturally Occurring Radioactivity.”**

- For each indoor research and development activity in which phosphogypsum is used, the facility shall maintain records which conform to the requirements of §61.209(c).
- Indoor research and development activities must be performed in a controlled laboratory setting which the general public cannot enter except on an infrequent basis for tours of the facility. Uses of phosphogypsum for outdoor agricultural research and development and agricultural field use must comply with §61.204.

Phosphogypsum not intended for distribution in commerce may be lawfully removed from a stack by an owner or operator to perform laboratory analyses required by this subpart or any other quality control or quality assurance analyses associated with wet acid phosphorus production.

[6/19/2014]

2.9 Phosphogypsum Resale or Transfer Requirements

In accordance with 40 CFR 61.208 (b)(1) and (2), each distributor, retailer, or reseller who purchases or receives phosphogypsum for subsequent resale or transfer shall prepare a certification document for each quantity of phosphogypsum which is resold or transferred which includes:

- The name and address of the distributor, retailer, or reseller;
- The name and address of the purchaser or recipient of the phosphogypsum;
- The quantity (in pounds) of phosphogypsum resold or transferred;
- The date of resale or transfer;
- A description of the intended end-use for the phosphogypsum;
- A copy of each certification document which accompanied the phosphogypsum at the time it was purchased or received by the distributor, retailer, or reseller; and
- The signature of the person who prepared the certification.

The distributor, retailer, or reseller shall retain the certification document for five years from the date of resale or transfer, and shall produce the document for inspection upon request by the Administrator, or his authorized representative. For every resale or transfer of phosphogypsum to a person other than an agricultural end-user, the distributor, retailer, or reseller shall also provide a copy of the certification document to the purchaser or transferee.

[6/19/2014]

Monitoring and Recordkeeping Requirements

2.10 Throughput Monitoring

The permittee shall monitor and record:

- The weight in pounds of phosphate ore for each batch placed in the kiln each calendar day.
- The weight in pounds of phosphogypsum for each batch placed in the kiln each calendar day.
- The total weight in tons of phosphate ore placed in the kiln each calendar year.
- The weight in pounds of phosphogypsum for each batch placed in the kiln each calendar day.
- The total hours the kiln has operated, when processing phosphate ore, each calendar day.
- The total hours the kiln has operated, when processing phosphogypsum, each calendar day.

- Total operational hours of the kiln, when processing phosphate ore, each calendar year determined by a summation of each calendar days operational hours of the kiln.
- Total operational hours of the kiln, when processing phosphogypsum, each calendar year determined by a summation of each calendar days operational hours of the kiln.

[6/19/2014]

2.11 Baghouse and Bubbler Water Documentation

The permittee shall keep the following documentation on site:

- Baghouse control efficiency for PM₁₀ and PM_{2.5}.
- The manufacturer's recommendation for baghouse operation.
- The bubbler water pH when recovering sulfur from phosphogypsum.

[6/19/2014]

2.12 Phosphogypsum Records

In accordance with 40 CFR 61.209 (c), each facility which uses phosphogypsum pursuant to §61.205 or §61.206 shall prepare records which include the following information:

- The name and address of the person in charge of the activity involving use of phosphogypsum.
- A description of each use of phosphogypsum, including the handling and processing that the phosphogypsum underwent.
- The location of each site where each use of phosphogypsum occurred, including the suite and/or building number, street, city, county, state, and zip code.
- The mailing address of each facility using phosphogypsum, if different from paragraph (c)(3) of this section.
- The date of each use of phosphogypsum.
- The quantity of phosphogypsum used.
- The certified average concentration of radium-226 for the phosphogypsum which was used.
- A description of all measures taken to prevent the uncontrolled release of phosphogypsum into the environment.
- A description of the disposition of any unused phosphogypsum.

[6/19/2014]

2.13 Phosphogypsum Records Retention

In accordance with 40 CFR 61.209 (d), these records shall be retained by the facility for at least five years from the date of use of the phosphogypsum and shall be produced for inspection upon request by the Administrator, or his authorized representative.

[6/19/2014]

2.14 Recordkeeping Requirements

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

[12/2/2013]

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;
- 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

- 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 30 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]

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]