



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, 2013

Kent Giddings, General Manager
Idaho Milk Products, Inc.
2249 S. Tiger Dr.
Jerome, ID 83338

RE: Facility ID No. 053-00014, Idaho Milk Products, Jerome
Final Permit Letter

Dear Mr. Giddings:

The Department of Environmental Quality (DEQ) is issuing Permit to Construct (PTC) No. P-2007.0205 Project 61208 to Idaho Milk Products for an increase MPC powder production at a milk processing facility located in Jerome. This PTC is issued in accordance with IDAPA 58.01.01.200 through 228, *Rules for the Control of Air Pollution in Idaho (Rules)* and is based on the certified information provided in your PTC application received on May 13, 2013.

This permit is effective immediately and replaces PTC No. P-2007.0205, issued on March 20, 2008. This permit does not release Idaho Milk Products from compliance with all other applicable federal, state, or local laws, regulations, permits, or ordinances.

In order to fully understand the compliance requirements of this permit, DEQ highly recommends that you schedule a meeting with Bobby Dye, Air Quality Analyst, at (208) 736-2190 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 Morrie Lewis at (208) 373-0502 or Morrie.Lewis@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

MSML

Permit No. P-2007.0205 PROJ 61208

Enclosures

AIR QUALITY

PERMIT TO CONSTRUCT

Permittee Idaho Milk Products, Inc.
Permit Number P-2007.0205
Project ID 61208
Facility ID 053-00014
Facility Location 2249 South Tiger Drive
Jerome, ID 83338

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, 2013



Morrie Lewis, Permit Writer



Mike Simon, Stationary Source Manager

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1. Acronyms, Units, and Chemical Nomenclature

acfm	actual cubic feet per minute
ASTM	American Society for Testing and Materials
CAA	Clean Air Act
CFR	Code of Federal Regulations
CI	compression ignition
CO	carbon monoxide
DEQ	Idaho Department of Environmental Quality
dscf	dry standard cubic feet
EPA	United States Environmental Protection Agency
°F	degrees Fahrenheit
ft	feet
gph	gallons per hour
gpm	gallons per minute
gr	grains (1 lb = 7,000 grains)
HP	horsepower
hr/yr	hours per consecutive 12-calendar-month period
ICE	internal combustion engines
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
ID No.	equipment identification number
kW	kilowatts
lb/day	pounds per calendar day
lb/hr	pounds per hour
m	meters
MMBtu	million British thermal units
MMscf	million standard cubic feet
MPC	milk protein concentrate
No.	number
NO _x	nitrogen oxides
NSPS	New Source Performance Standards
PM	particulate matter
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
ppm	parts per million by volume
PTC	permit to construct
<i>Rules</i>	<i>Rules for the Control of Air Pollution in Idaho</i>
scf	standard cubic feet
T/yr	tons per consecutive 12-calendar-month period

3, 5	<u>Permeate Powder Receiver (P105)</u> Manufacturer: C.E. Rogers Maximum Production: 8,824 lb/hr dry solids (Permeate) Maximum Operation: 8,760 hr/yr	<u>Permeate Powder Receiving Baghouse (P105)</u> Manufacturer: Nu-Con Model: NCRD 84-21-3T
6	<u>Boiler #1 (P106)</u> Manufacturer: Superior Boiler Works Model: Super Seminole 4000 Maximum Operation: 8,760 hr/yr Maximum Capacity: 33.48 MMBtu/hr Fuel: Natural Gas Fuel Consumption: 32,819 scf/hr	<u>None</u>
6	<u>Boiler #2 (P107)</u> Manufacturer: Superior Boiler Works Model: Super Seminole 4000 Maximum Operation: 8,760 hr/yr Maximum Capacity: 33.48 MMBtu/hr Fuel: Natural Gas Fuel Consumption: 32,819 scf/hr	<u>None</u>
3, 7	<u>Emergency Generator (P108)</u> Manufacturer: Cummins Model: QST30-G5 NR2 Date of construction: 2007-2008 Maximum Operation: 100 hr/yr (non-emergency) Maximum Capacity: 1490 HP Fuel: Diesel Fuel Consumption: 72.2 gph Displacement: 2.5 liters/cylinder	<u>None</u>

3. Facility-Wide Conditions

Visible Emissions

- 3.1 The permittee shall not discharge any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three minutes in any 60-minute period which is greater than 20% opacity as determined by procedures contained in IDAPA 58.01.01.625. These provisions shall not apply when the presence of uncombined water, NO_x, and/or chlorine gas is the only reason for the failure of the emission to comply with the requirements of this section.
- 3.2 The permittee shall conduct a monthly facility-wide inspection of potential sources of visible emissions, during daylight hours and under normal operating conditions. The visible emissions inspection shall consist of a see/no see evaluation for each potential source. 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 emissions 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.

Fugitive Emissions

- 3.3 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, considerations 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 particulate matter. 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, 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.

- 3.4 The permittee shall conduct a quarterly 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.

[P-2007.0205, 6/19/13]

Odors

- 3.5 The permittee shall not allow, suffer, cause, or permit the emission of odorous gases, liquids, or solids to the atmosphere in such quantities as to cause air pollution.

4. MPC / Skim Milk Process

4.1 Process Description

Concentrated skim milk or MPC is pumped from the dryer balance tank, through a strainer, and into the main body of the MPC / Skim Milk Dryer using a high-pressure pump. Air used in drying passes over a Maxon Cross-Fire natural gas-fired burner and enters the dryer through the top of the main chamber. Air is exhausted through four ports to four cyclone collectors. Air from the cyclones exhausts into two MPC / Skim Milk Dryer Baghouses (P101A and P101B).

Powder collected in the cyclones and the MPC / Skim Milk Dryer Baghouses is conveyed to the MPC / Skim Milk Fluid Bed. Air from the MPC / Skim Milk Fluid Bed exhausts into the MPC / Skim Milk Fluid Bed Baghouse (P102), and powder collected in this baghouse is conveyed back to the MPC / Skim Milk Fluid Bed. Exhaust from the MPC / Skim Milk Fluid Bed Baghouse discharges to the atmosphere. The powder product is conveyed to a sifter and then to storage silos.

4.2 **Emissions Control Description**

Table 4.1 MPC / Skim Milk Process Description

Emission Units (ID No.)	Emission Control Devices (ID No.)	Emission Points
<p><u>MPC / Skim Milk Dryer (P101)</u> Dryer Manufacturer: C.E. Rogers Burner Manufacturer: Maxon Model: Crossfire Line Burner Maximum Production: 5,745 lb/hr dry solids (MPC) 13,027 lb/hr dry solids (Skim Milk) Maximum Capacity: 40.0 MMBtu/hr Maximum Operation: 8,760 hr/yr Fuel: Natural Gas Fuel Consumption: 39,216 scf/hr</p>	<p><u>MPC / Skim Milk Dryer Baghouse (P101A)</u> Manufacturer: C.E. Rogers Model: CER-400 Type: Reverse air Air-to-Cloth Ratio: 7/1 Control efficiency: 94.49% (MPC) 97.57% (Skim Milk) Exit height: 135.8 ft Exit diameter: 5.7 ft Exit air flow rate: 63,500 acfm Exit temperature: ≥190 °F</p> <p><u>MPC / Skim Milk Dryer Baghouse (P101B)</u> Manufacturer: C.E. Rogers Model: CER-400 Type: Reverse air Air-to-Cloth Ratio: 7/1 Control efficiency: 94.49% (MPC) 97.57% (Skim Milk) Exit height: 135.8 ft Exit diameter: 5.7 ft Exit air flow rate: 63,500 acfm Exit temperature: ≥190 °F</p>	<p>Stack P101A</p> <p>Stack P101B</p>
<p><u>MPC / Skim Milk Fluid Bed (P102)</u> Manufacturer: C.E. Rogers Maximum Production: 5,738 lb/hr dry solids (MPC) 13,020 lb/hr dry solids (Skim Milk) Maximum Operation: 8,760 hr/yr</p>	<p><u>MPC / Skim Milk Fluid Bed Baghouse (P102)</u> Manufacturer: C.E. Rogers Model: CER-78 Type: Reverse air Air-to-Cloth Ratio: 5/1 Control efficiency: 99.85% (MPC) 99.94% (Skim Milk) Exit height: 135.8 ft Exit diameter: 2.5 ft Exit air flow rate: 9,090.7 acfm Exit temperature: ≥130 °F</p>	<p>Stack P102</p>

Emission Limits

4.3 Emission Limits

The PM₁₀ emissions from the MPC / Skim Milk Dryer and the MPC / Skim Milk Fluid Bed stacks shall not exceed any corresponding emissions rate limits listed in Table 4.2.

Table 4.2 MPC / Skim Milk Dryer Emission Limits¹

Source Description	PM ₁₀ ²	
	lb/hr ³	T/yr ⁴
MPC / Skim Milk Dryer (P101A and P101B combined emissions) ⁵	7.90	34.60
MPC / Skim Milk Fluid Bed (P102)	0.78	3.42

- 1) In absence of any other credible evidence, compliance is assured by complying with this permit's operating, monitoring and record keeping requirements.
- 2) Particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers, including condensable particulate as defined in IDAPA 58.01.01.006.81.
- 3) Pounds per hour as determined by a test method prescribed by IDAPA 58.01.01.157 or DEQ approved alternative.
- 4) Tons per consecutive 12-calendar month period.
- 5) The Skim Milk Dryer emission limits (lb/hr and T/yr) are limits on the combined emissions from both the P101A stack and the P101B stack.

Operating Requirements

4.4 MPC / Skim Milk Production Limits

The MPC / Skim Milk process shall process MPC or skim milk as the raw materials, and the production rate shall not exceed the values shown in Table 4.3.

Table 4.3 MPC / Skim Milk Process Production Limits

Product	Production Rate (lb/day) ¹
MPC powder	210,000 at 4.0% moisture content
Skim milk powder	323,784 at 3.5% moisture content

- 1) lb/day is defined as pounds of product per calendar day.

[P-2007.0205, 6/19/13]

4.5 Allowable Fuels

The MPC / Skim Milk Dryer shall combust only natural gas.

4.6 Baghouse Requirements

- 4.6.1 The permittee shall install and operate the MPC / Skim Milk Dryer Baghouses (P101A and P101B) and the MPC / Skim Milk Fluid Bed Baghouse (P102) to control PM and PM₁₀ emissions from the MPC / Skim Milk Dryer and the MPC / Skim Milk Fluid Bed.
- 4.6.2 The permittee shall maintain a Baghouse Procedures document for the inspection and operation of the MPC / Skim Milk Dryer Baghouses (P101A and P101B) and the MPC / Skim Milk Fluid Bed Baghouse (P102). The Baghouse Procedures document shall be an independent document, but may include summaries of procedures in the manufacturer-supplied operating manuals.

- 4.6.3 The Baghouse Procedures document shall describe the procedures that will be followed to comply with General Provision 13.14 and at a minimum shall include:
- procedures for the set-up and calibration of the broken bag detectors
 - schedule and procedures for checking the broken bag detector system response and drift;
 - signal levels in percent of scale for baseline operation (without the presence of broken bags); and
 - signal levels in percent of scale for alarms to indicate the presence of broken bags.
- 4.6.4 The Baghouse Procedures document shall also include a schedule and procedures for corrective action that will be taken when an alarm signal level is exceeded by the broken bag detector. At a minimum the document shall include:
- procedures to determine if bags are ruptured; and
 - procedures to determine if bags are not appropriately secured in place.
- 4.6.5 The permittee shall maintain records of the dates that alarm signal levels are exceeded by the broken bag detectors in accordance with General Provision 13.22. The records shall include a description of the corrective action that was taken.
- 4.6.6 The Baghouse Procedures document shall contain a certification by a responsible official. Any changes to the Baghouse Procedures document shall be submitted within 15 days of the change.
- 4.6.7 The Baghouse Procedures document shall remain onsite at all times and shall be made available to DEQ representatives upon request.
- 4.6.8 The operating and monitoring requirements specified in the Baghouse Procedures document are incorporated by reference to this permit and are enforceable permit conditions.

[P-2007.0205, 6/19/13]

Monitoring and Recordkeeping Requirements

4.7 Production Monitoring and Recordkeeping

The permittee shall monitor and record the MPC powder and skim milk powder production of the facility, in pounds per calendar day, to demonstrate compliance with Permit Condition 4.4. Records of this information shall be maintained in accordance with General Provision 13.22.

4.8 Performance Test

- 4.8.1 The permittee shall conduct performance testing to measure the PM₁₀ emissions from each of the MPC / Skim Milk Dryer Baghouse stacks (P101A and P101B) to demonstrate compliance with the pounds per hour PM₁₀ emission limit in Permit Condition 4.3. The permittee is encouraged to submit a source testing protocol for approval 30 days prior to conducting the performance tests.
- 4.8.2 The permittee shall test in accordance with IDAPA 58.01.01.157 and the conditions of this permit, including the operating requirements for the MPC / Skim Milk Dryer and General Provisions 13.19 through 13.21. The performance test shall be conducted in accordance with the procedures of EPA Reference Method 5, Method 202, and Method 9 in 40 CFR 60, Appendix A, or DEQ approved alternative.
- 4.8.3 The permittee shall monitor and record the following during the performance test:
- The type of raw material processed, MPC or skim milk.

- The production rate of the MPC / Skim Milk process, in pounds per hour, once every 15 minutes.
 - The visible emissions observed, using the methods specified in IDAPA 58.01.01.625.
- 4.8.4 Performance testing shall be performed according to the following schedule for each baghouse:
- If the PM₁₀ emission rate in pounds per hour measured in the most recent test is less than or equal to 75% of the emission standard in Permit Condition 4.3, the next test shall be conducted within five years of the test date.
 - If the PM₁₀ emission rate in pounds per hour measured during the most recent performance test is greater than 75% but less than or equal to 90% of the emission standard in Permit Condition 4.3, the next test shall be conducted within two years of the test date.
 - If the PM₁₀ emission rate in pounds per hour measured during the most recent performance test is greater than 90% of the emission standard in Permit Condition 4.3, the next test shall be conducted within one year of the test date.

[P-2007.0205, 6/19/13]

Reporting Requirements

4.9 Performance Test Reporting

Performance test reporting shall be conducted in accordance with General Provisions 13.19 through 13.21 of this permit and sent to the following address:

Air Quality Permit Compliance
Twin Falls Regional Office
Department of Environmental Quality
650 Addison Avenue West
Suite 110
Twin Falls, ID 83301

Phone: (208) 736-2190

Fax: (208) 736-2194

5. Permeate Process

5.1 Process Description

Crystallized permeate concentrate is strained and pumped into the main body of the Permeate Dryer using a high-pressure pump. The dried permeate discharges onto a lactose conversion belt and into the Permeate Fluid Bed re-dryer / cooler. Air used in drying passes over a Maxon Cross-Fire natural gas-fired burner and enters the dryer through the top of the main chamber. Air is exhausted through two ports to two cyclone collectors. Powder from the cyclones drops into the Permeate Fluid Bed, while the air then enters a sanitary scrubber (P103) prior to discharge to the atmosphere.

Permeate powder from the dryer and cyclones discharges into the Permeate Fluid Bed re-dryer / cooler. Powder collected in the Permeate Fluid Bed Baghouse is conveyed back to the Permeate Fluid Bed and the exhaust from the Permeate Fluid Bed Baghouse (P104) discharges to the atmosphere.

The powder will be conveyed pneumatically to a sifter and then to one of two permeate storage silos. The powder receiving area will have a Permeate Powder Receiving Baghouse (P105) with exhaust that will discharge to the atmosphere.

Powder will be conveyed from one of four silos to either a bag filler or a tote filler. The powder silos are equipped with a baghouse filtering system, and the air used in conveying is discharged back into the plant environment.

5.2 **Emissions Control Description**

Table 5.1 Permeate Dryer Description

Emission Units (ID No.)	Emission Control Devices (ID No.)	Emission Points
<p><u>Permeate Dryer (P103)</u> Dryer Manufacturer: C.E. Rogers Burner Manufacturer: Maxon Model: Crossfire Line Burner Maximum Production: 8,850 lb/hr dry solids (Permeate) Maximum Operation: 8,760 hr/yr Maximum Capacity: 12.0 MMBtu/hr Fuel: Natural Gas Fuel Consumption: 11,765 scf/hr</p>	<p><u>Permeate Dryer Scrubber (P103)</u> Manufacturer: C.E. Rogers Model: CER-WSS Type: Water Circulating Scrubber System Water Flow: 250 gpm Control efficiency: 87% (Permeate) Exit height: 116.8 ft Exit diameter: 6.5 ft Exit air flow rate: 52,463 acfm Exit temperature: ≥112 °F</p>	<p>Stack P103</p>
<p><u>Permeate Fluid Bed (P104)</u> Manufacturer: C.E. Rogers Maximum Production: 9,924 lb/hr dry solids (Permeate) Maximum Operation: 8,760 hr/yr</p>	<p><u>Permeate Fluid Bed Baghouse (P104)</u> Manufacturer: C.E. Rogers Model: CER-216 Type: Reverse air Air-to-Cloth Ratio: 6.5/1 Control efficiency: 99.9% (Permeate) Exit height: 116.8 ft Exit diameter: 4.2 ft Exit air flow rate: 29,384 acfm Exit temperature: ≥130 °F</p>	<p>Stack P104</p>
<p><u>Permeate Powder Receiver (P105)</u> Manufacturer: C.E. Rogers Maximum Production: 8,824 lb/hr dry solids (Permeate) Maximum Operation: 8,760 hr/yr</p>	<p><u>Permeate Powder Receiving Baghouse (P105)</u> Manufacturer: Nu-Con Model: NCRD 84-21-3T Type: Reverse air Air-to-Cloth Ratio: 4.7/1 Control efficiency: 99.9995% (Permeate) Exit height: 43.1 ft Exit temperature: ambient</p>	<p>Stack P105</p>

Emission Limits

5.3 **Emission Limits**

The PM₁₀ emissions from the Permeate Dryer, the Permeate Fluid Bed, and the Permeate Powder Receiver stacks shall not exceed any corresponding emissions rate limits listed in Table 5.2.

Table 5.2 Permeate Dryer Emission Limits¹

Source Description	PM ₁₀ ²	
	lb/hr ³	T/yr ⁴
Permeate Dryer (P103)	7.01	30.68
Permeate Fluid Bed (P104)	1.97	8.60
Permeate Powder Receiver (P105)	0.05	0.20

- 1) In absence of any other credible evidence, compliance is assured by complying with this permit's operating, monitoring and record keeping requirements.
- 2) Particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers, including condensable particulate as defined in IDAPA 58.01.01.006.81.
- 3) Pounds per hour as determined by a test method prescribed by IDAPA 58.01.01.157 or DEQ approved alternative.
- 4) Tons per consecutive 12-calendar month period.

Operating Requirements

5.4 Permeate Production Limits

The permeate process shall process permeate as the raw material, and the production rate shall not exceed the values shown in Table 5.3.

Table 5.3 Permeate Process Production Limits

Product	Production Rate (lb/day) ¹
Permeate powder	218,304

- 1) lb/day is defined as pounds of product per calendar day.

5.5 Allowable Fuels

The Permeate Dryer shall combust only natural gas.

5.6 Baghouse Requirements

5.6.1 The permittee shall install and operate the Permeate Fluid Bed Baghouse (P104) and the Permeate Powder Receiver Baghouse (P105) to control PM and PM₁₀ emissions from the Permeate Fluid Bed and the Permeate Powder Receiver.

5.6.2 The permittee shall maintain a Baghouse Procedures document for the inspection and operation of the Permeate Fluid Bed Baghouse (P104) and the Permeate Powder Receiver Baghouse (P105). The Baghouse Procedures document shall be an independent document, but may include summaries of procedures in the manufacturer-supplied operating manuals.

5.6.3 The Baghouse Procedures document shall describe the procedures that will be followed to comply with General Provision 13.14 and at a minimum shall include:

- procedures for the set-up and calibration of the broken bag detectors
- schedule and procedures for checking the broken bag detector system response and drift;
- signal levels in percent of scale for baseline operation (without the presence of broken bags); and
- signal levels in percent of scale for alarms to indicate the presence of broken bags.

- 5.6.4 The Baghouse Procedures document shall also include procedures for corrective action that will be taken when an alarm signal level is exceeded by the broken bag detector. At a minimum the document shall include:
- procedures to determine if bags are ruptured; and
 - procedures to determine if bags are not appropriately secured in place.
- 5.6.5 The permittee shall maintain records of the dates that alarm signal levels are exceeded by the broken bag detectors in accordance with General Provision 13.22. The records shall include a description of the corrective action that was taken.
- 5.6.6 The Baghouse Procedures document shall contain a certification by a responsible official. Any changes to the Baghouse Procedures document shall be submitted within 15 days of the change.
- 5.6.7 The Baghouse Procedures document shall remain onsite at all times and shall be made available to DEQ representatives upon request.
- 5.6.8 The operating and monitoring requirements specified in the Baghouse Procedures document are incorporated by reference to this permit and are enforceable permit conditions.

[P-2007.0205, 6/19/13]

5.7 **Scrubber Requirements**

- 5.7.1 The permittee shall install and operate the Permeate Dryer Scrubber (P103) to control PM and PM₁₀ emissions from the Permeate Dryer.
- 5.7.2 The permittee shall maintain a Scrubber Procedures document for the inspection and operation of the Permeate Dryer Scrubber (P103). The Scrubber Procedures document shall be an independent document, but may include summaries of procedures in the manufacturer-supplied operating manuals.
- 5.7.3 The Scrubber Procedures document shall describe the procedures that will be followed to comply with General Provision 13.14 and the manufacturer's recommended specifications that shall be maintained for each of the following operating parameters:
- the minimum scrubbing media flow rate in gallons per minute;
 - the minimum pressure drop across the scrubber in inches of water; and
 - the maximum reading for the solids density meter.
- 5.7.4 The Scrubber Procedures document shall include requirements to periodically monitor and record the scrubbing media flow rate, the pressure drop, and the solids density meter reading no less frequently than each week. All records shall be maintained on-site for a period of 5 years in accordance with General Provision 13.22, and shall be made available to DEQ representatives upon request.

As an alternative to the manufacturer's recommended specifications, the permittee may establish new operating parameters by conducting a performance test that demonstrates compliance with the PM₁₀ pound per hour emission limits in Permit Condition 5.3 for the Permeate Dryer stack while operating at the alternative operating parameters. The performance test shall be conducted in accordance with the Test Methods and Procedures specified in the Rules (IDAPA 58.01.01.157) and in accordance with a DEQ approved source test protocol. All operating parameters specified in this permit condition shall be continuously monitored and recorded during each test run. The permittee may request to operate outside of the operating parameters specified by the manufacturer during the performance test by submitting a written source protocol to DEQ for approval and requesting to operate under alternative operating parameters during the duration

of the test. The protocol shall describe how the operating parameters will be monitored during the performance test. Once the source test is completed the permittee may request in writing to operate in accordance with alternative operating parameters. The request shall include a source test report and justification for the alternative operating parameters. Upon receiving DEQ written approval of the source test and the requested alternative operating parameters, the permittee shall operate in accordance with those DEQ approved alternative operating parameters. A copy of DEQ's approval shall be maintained on site with a copy of this permit.

- 5.7.5 The Scrubber Procedures document shall contain a certification by a responsible official. Any changes to the Scrubber Procedures document shall be submitted within 15 days of the change.
- 5.7.6 The operating and monitoring requirements specified in the Scrubber Procedures document are incorporated by reference to this permit and are enforceable permit conditions.

[P-2007.0205, 6/19/13]

Monitoring and Recordkeeping Requirements

5.8 Permeate Production Monitoring and Recordkeeping

The permittee shall monitor and record the Permeate powder produced, in pounds per calendar day, to demonstrate compliance with Permit Condition 5.4. Records of this information shall be maintained in accordance with General Provision 13.22.

5.9 Performance Test

- 5.9.1 The permittee shall conduct performance testing to measure the PM₁₀ emissions from the Permeate Dryer Scrubber stack (P103) to demonstrate compliance with the pounds per hour PM₁₀ emission limit in Permit Condition 5.3. The permittee is encouraged to submit a source testing protocol for approval 30 days prior to conducting the performance test.
- 5.9.2 The permittee shall test in accordance with IDAPA 58.01.01.157 and the conditions of this permit, including the operating requirements for the Permeate Dryer and General Provisions 13.19 through 13.21. The performance test shall be conducted in accordance with the procedures of EPA Reference Method 5, Method 202, and Method 9 in 40 CFR 60, Appendix A, or DEQ approved alternative.
- 5.9.3 The permittee shall monitor and record the following during the performance test:
- The production rate of the Permeate process, in pounds per hour, once every 15 minutes.
 - The scrubbing media flow rate of the Permeate Dryer Scrubber, in gallons per minute, once every 15 minutes.
 - The pressure drop across the Permeate Dryer Scrubber, in inches of water, once every 15 minutes.
 - The visible emissions observed, using the methods specified in IDAPA 58.01.01.625.
- 5.9.4 Performance testing shall be performed according to the following schedule:
- If the PM₁₀ emission rate in pounds per hour measured in the most recent test is less than or equal to 75% of the emission standard in Permit Condition 5.3, the next test shall be conducted within five years of the test date.
 - If the PM₁₀ emission rate in pounds per hour measured during the most recent performance test is greater than 75% but less than or equal to 90%, of the emission standard in Permit Condition 5.3, the next test shall be conducted within two years of the test date.

- If the PM₁₀ emission rate in pounds per hour measured during the most recent performance test is greater than 90% of the emission standard in Permit Condition 5.3, the next test shall be conducted within one year of the test date.

[P-2007.0205, 6/19/13]

5.10 **Performance Test Reporting**

Performance test reporting shall be conducted in accordance with General Provisions 13.19 through 13.21 of this permit and sent to the address listed in Permit Condition 4.9.

6. Boilers

6.1 Process Description

Boiler #1 (P106) and Boiler #2 (P107) will provide steam for a variety of heat processes at the facility. The boilers are sized to be fully redundant. Processes that utilize heat input from the boilers include separation, pasteurization, and evaporating processes.

6.2 Emissions Control Description

Table 6.1 Boilers

Emission Units (ID No.)		Emission Control Devices (ID No.)	Emission Points
<u>Boiler #1 (P106)</u>		<u>None</u> Exit height: 39.5 ft Exit diameter: 4.1 ft Exit air flow rate: 10,389 acfm Exit temperature: ≥ 350 °F	Stack P106
Manufacturer:	Superior Boiler Works		
Model:	Super Seminole 4000		
Maximum Operation:	8,760 hr/yr		
Maximum Capacity:	33.48 MMBtu/hr		
Fuel:	Natural Gas		
Fuel Consumption:	32,819 scf/hr		
<u>Boiler #2 (P107)</u>		<u>None</u> Exit height: 39.5 ft Exit diameter: 4.1 ft Exit air flow rate: 10,389 acfm Exit temperature: ≥ 350 °F	Stack P107
Manufacturer:	Superior Boiler Works		
Model:	Super Seminole 4000		
Maximum Operation:	8,760 hr/yr		
Maximum Capacity:	33.48 MMBtu/hr		
Fuel:	Natural Gas		
Fuel Consumption:	32,819 scf/hr		

Emission Limits

6.3 Particulate Matter Emissions

The permittee shall not discharge to the atmosphere from any fuel-burning equipment particulate matter in excess of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume for natural gas in accordance with IDAPA 58.01.01.676.

Operating Requirements

6.4 Allowable Fuels

Boiler #1 and Boiler #2 shall combust only natural gas.

6.5 Natural Gas Fuel Usage

The maximum quantity of natural gas combusted in the boilers (Boiler #1 and Boiler #2 combined) shall not exceed 287.5 million standard cubic feet per any consecutive 12-calendar month period (MMscf/yr).

Monitoring and Recordkeeping Requirements

6.6 Fuel Usage Monitoring and Recordkeeping

The permittee shall monitor and record the amount of natural gas fuel combusted in the boilers (Boiler #1 and Boiler #2) during each calendar month to demonstrate compliance with Permit Condition 6.5. The natural gas fuel usage shall be recorded in units of million standard cubic feet per 12-calendar month period (MMscf/yr), and shall be calculated as a rolling 12-calendar month usage rate and determined on a monthly basis. Records of this information shall be maintained in accordance with General Provision 13.22.

6.7 40 CFR 60, Subpart Dc – Reporting and Recordkeeping Requirements

The permittee shall comply with all applicable reporting and recordkeeping requirements of 40 CFR 60, Subpart Dc – New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units.

- The permittee shall submit notification of the date of construction or reconstruction of each boiler and actual startup for each boiler, in accordance with 40 CFR 60.48c(a) and 40 CFR 60.7. This notification shall include:
 - The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.
 - The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.
- The permittee shall record and maintain records of the amount of fuel combusted in the boilers (Boiler #1 and Boiler #2) during each calendar month, in accordance with 40 CFR 60.48c(g)(2). Alternatively, the permittee shall record and maintain records of the total amount of fuel delivered to the site for steam-generating purposes during each calendar month, in accordance with 40 CFR 60.48c(g)(3).
- All records shall be maintained by the permittee for a period of two years, in accordance with 40 CFR 60.48c(i).
- The reporting period for any reports required is each six-month period. All reports shall be submitted to DEQ and shall be postmarked by the 30th day following the end of the reporting period, in accordance with 40 CFR 60.48c(j). Reports shall be submitted to DEQ at the address listed in Permit Condition 4.9.

[P-2007.0205, 6/19/13]

6.8 40 CFR 60, Subpart A – General Provisions

The permittee shall comply with all applicable requirements of 40 CFR 60, Subpart A – General Provisions.

- The notification of the date of construction or reconstruction required by Permit Condition 6.7 shall be postmarked no later than 30 days after such date, in accordance with 40 CFR 60.7(a)(1).
- The notification of the actual date of initial startup required by Permit Condition 6.7 shall be postmarked within 15 days after such date, in accordance with 40 CFR 60.7(a)(3).
- The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the boilers, in accordance with 40 CFR 60.7(b).

- At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate the boilers in a manner consistent with good air pollution control practice for minimizing emissions, in accordance with 40 CFR 60.11(d).

7. Emergency Generator

7.1 Process Description

An emergency generator will provide backup power in the event of a power outage.

7.2 Emissions Control Description

Table 7.1 Emergency Generator

Emission Units (ID No.)	Emission Control Devices (ID No.)	Emission Points
<u>Emergency Generator (P108)</u>		
Manufacturer: Cummins	None	Stack P108
Model: QST30-G5 NR2		
Date of construction: 2007-2008		
Maximum Operation: 100 hr/yr (non-emergency)		
Maximum Capacity: 1490 HP		
Fuel: Diesel		
Fuel Consumption: 72.2 gph		
Displacement: 2.5 liters/cylinder		
	Exit height: 13.8 ft	
	Exit diameter: 2.7 ft	
	Exit air flow rate: 3,399 acfm	
	Exit temperature: ≥ 500 °F	

Emission Limits

7.3 40 CFR 60, Subpart III – Emissions Standards for Owners and Operators

The permittee shall comply with the applicable emission standards of 40 CFR 60, Subpart III – New Source Performance Standards for Compression Ignition Internal Combustion Engines.

- The permittee shall operate and maintain the emergency generator engine according to the manufacturer's written instructions or procedures that are approved by the engine manufacturer, over the entire life of the engine, in accordance with 40 CFR 60.4206.
- The permittee shall comply with the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants, in accordance with 40 CFR 60.4205(b) and 40 CFR 60.4202(a)(2).
 - Exhaust emissions from the emergency generator engine shall not exceed the exhaust emission standards contained in Table 7.2, in accordance with 40 CFR 89.112.

Table 7.2 Emergency Generator Engine Exhaust Emission Limits¹

NMHC+NO _x (g/HP-hr)	CO (g/HP-hr)	PM (g/HP-hr)
4.77	2.61	0.15

1) Table 1 of 40 CFR 89.112, Tier 2 engines greater than 560 kW.

- Exhaust opacity from the emergency generator engine shall not exceed 20 percent during the acceleration mode, 15 percent during the lugging mode, and 50 percent during the peaks in either the acceleration or lugging modes, in accordance with 40 CFR 89.113. Opacity levels are to be measured and calculated as set forth in 40 CFR part 86, subpart I.

Operating Requirements

7.4 Allowable Fuels

The emergency generator engine shall combust only diesel fuel meeting the requirements of Permit Condition 7.5.

7.5 40 CFR 60, Subpart IIII - Fuel Requirements for Owners and Operators

The permittee shall comply with the applicable fuel requirements of 40 CFR 60, Subpart IIII – New Source Performance Standards for Compression Ignition Internal Combustion Engines.

- The permittee shall operate and maintain the emergency generator according to the manufacturer's written instructions or procedures that are approved by the engine manufacturer, over the entire life of the engine, in accordance with 40 CFR 60.4206.
- The permittee shall use diesel fuel that meets the requirements of 40 CFR 80.510(b), with a maximum sulfur content of 15 ppm, and a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent, in accordance with 40 CFR 60.4207.

[P-2007.0205, 6/19/13]

7.6 40 CFR 60, Subpart IIII – Compliance Requirements

The permittee shall comply with the applicable compliance requirements of 40 CFR 60, Subpart IIII – New Source Performance Standards for Compression Ignition Internal Combustion Engines.

- Maintenance checks and readiness testing of the emergency generator engine is limited to 100 hours per year, in accordance with 40 CFR 60.4211(e). There is no time limit on the use of the emergency generator engine in emergency situations. The emergency generator engine may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine.
- Any operation other than emergency operation, maintenance, and testing is prohibited in accordance with 40 CFR 60.4211(e). Anyone may petition EPA for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency generator engine beyond 100 hours per year.
- The permittee shall operate and maintain the emergency generator engine according to the manufacturer's written instructions or procedures developed by the permittee that are approved by the engine manufacturer, in accordance with 60.4211(a). In addition, the permittee shall only change those settings that are permitted by the manufacturer.
- The emergency generator engine purchased by the permittee shall be certified to the applicable emission standard in 40 CFR 60.4205(b) for the same model year and maximum engine power, and shall be installed and configured according to the manufacturer's specifications, in accordance with 40 CFR 60.4211(c).

7.7 **40 CFR 60, Subpart III – Testing Requirements for Owners and Operators**

The permittee shall comply with the applicable testing requirements of 40 CFR 60, Subpart III – New Source Performance Standards for Compression Ignition Internal Combustion Engines.

- Any required performance tests shall be conducted according to the paragraphs of 40 CFR 60.4214 (a) through (d).

7.8 **40 CFR 60, Subpart III – Other Requirements for Owners and Operators**

The permittee shall comply with the applicable requirements of 40 CFR 60, Subpart III – New Source Performance Standards for Compression Ignition Internal Combustion Engines.

- The permittee shall comply with the deadlines for importing and installing an emergency generator produced in a previous model year, in accordance with 40 CFR 60.4208 (a) through (g).
- In accordance with 40 CFR 60.4209(a), the permittee shall install a non-resettable hour meter prior to startup of the emergency generator.

Monitoring and Recordkeeping Requirements

7.9 **Fuel Sulfur Content Recordkeeping**

The permittee shall maintain documentation of supplier verification of the fuel oil sulfur content on an as-received basis for every shipment, in accordance with General Provision 13.22 and to demonstrate compliance with Permit Condition 7.5.

7.10 **Operating Hours Recordkeeping**

The permittee shall record and maintain the operating hours of the emergency generator engine on a monthly and annual basis to demonstrate compliance with Permit Condition 7.6. Records of this information shall be maintained in accordance with General Provision 13.22.

Reporting Requirements

7.11 **40 CFR 60, Subpart III – Notification, Reports, and Records for Owners and Operators**

The permittee shall comply with all applicable notification, reporting, and recordkeeping requirements of 40 CFR 60, Subpart III – New Source Performance Standards for Compression Ignition Internal Combustion Engines.

- Any petitions, notifications, or reporting required by 40 CFR 60, Subpart III or Subpart A shall be sent to the following addresses:

Director Air and Waste
US EPA
1200 Sixth Avenue,
Seattle, WA 98101

&

Air Quality Permit Compliance
Twin Falls Regional Office
Department of Environmental Quality
650 Addison Avenue West
Suite 110
Twin Falls, ID 83301

7.12 **40 CFR 60, Subpart A – General Provisions**

The permittee shall comply with all applicable requirements of 40 CFR 60, Subpart A – General Provisions.

8. General Provisions

General Compliance

8.1 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.]

8.2 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]

8.3 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

8.4 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

8.5 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]

8.6 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

8.7 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.

8.8 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.

8.9 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

8.10 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

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

[IDAPA 58.01.01.130–136, 4/5/00]

Certification

8.12 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

8.13 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

8.14 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

8.15 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

8.16 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]