



STATE OF IDAHO  
DEPARTMENT OF  
ENVIRONMENTAL QUALITY

1410 N Hilton Street, Boise, ID 83706  
(208) 373-0502

Brad Little, Governor  
Jess Byrne, Director

September 3, 2021

Dave Stiner, Corporate Director of Facilities and Environmental Compliance  
True West Beef, LLC  
3101 W Main St., Suite 200  
Boise, ID 83702

RE: Facility ID No. 053-00053, True West Beef, LLC, Jerome  
Final Permit Letter

Dear Mr. Stiner:

The Department of Environmental Quality (DEQ) is issuing Permit to Construct (PTC) No. P-2021.0005 Project 62580 to True West Beef, LLC for the Beef Processing Plant located at Jerome. 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 15, 2021.

This permit is effective immediately. This permit does not release True West Beef, LLC 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 Twin Falls Regional Office, 650 Addison Avenue West, Fax (208) 736-2194.

In order to fully understand the compliance requirements of this permit, as requested, Bobby Dye, Air Quality and Remediation Regional Manager, at (208) 736-2190, will schedule a permit handoff meeting to review and discuss the terms and conditions of this permit. Please note that this meeting should be scheduled once the permitted emissions units are operating and some representative records required by the permit have been generated by the facility. 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

Mr. Stiner  
September 3, 2021  
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contested case, I encourage you to contact Zach Pierce at (208) 373-0502 or zach.pierce@deq.idaho.gov to address any questions or concerns you may have with the enclosed permit.

Sincerely,

A handwritten signature in cursive script, appearing to read "Mike Simon".

Mike Simon  
Stationary Source Bureau Chief  
Air Quality Division

MS\zp

Permit No. P-2021.0005 PROJ 62580

Enclosures

# Air Quality

## PERMIT TO CONSTRUCT

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**Permittee** True West Beef, LLC  
**Permit Number** P-2021.0005  
**Project ID** 62580  
**Facility ID** 053-00053  
**Facility Location** Hwy. 93 and Road 100 North  
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** September 3, 2021

  
**Zach Pierce, Permit Writer**

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**Mike Simon, Stationary Source Bureau Chief**

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# 1 Permit Scope

## Purpose

1.1 This is an initial permit to construct (PTC) for a new beef processing facility.

## Regulated Sources

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

**Table 1.1 Regulated Sources**

Permit Section	Source	Control Equipment
2	<u>Air Make-Up Units (14):</u> Total Firing Rate: 84.25 MMBtu/hr Burner Make: Maxon NP-LE Fuel: Natural Gas	Low-NO <sub>x</sub> burners
	<u>Blood Meal Bin:</u> Capacity: 100 cfm	Baghouse
	<u>Salt Bin:</u> Capacity: 1,000 cfm	Baghouse
3	Blood Management: Blood Coagulator, blood dryer, blood centrifuge, blood tank  <u>Blood Dryer:</u> Rated Capacity: 4.5 MMBtu/hr Max. production: 920 T/yr blood meal Fuel: Natural Gas	<u>Packed Bed Scrubber No. 1 (PBS-A1):</u> Manufacturer: Robertson Technologies Model: RT-95KPBS Air Flow: 95,000 cfm Pressure Drop: 1 to 6 inches Odor Control Eff: 85%  <u>Two-Stage Scrubber System No. 1 (C1):</u> <u>Venturi Scrubber:</u> Manufacturer: Robertson Technologies Model: RT-12KVS Air Flow: 12,000 cfm Pressure Drop: ≥4 inches  <u>Packed Bed Scrubber:</u> Manufacturer: Robertson Technologies Model: RT-12KPBS Air Flow: 12,000 scfm Pressure Drop: 1 to 6 inches Odor Control Eff: 85%

3	<p>Byproducts Processing: Screening, grinding, pressing, centrifuges, screws, heat exchangers, cookers</p> <p>Max. production: 12,155 T/yr meat and bone meal (MBM)</p>	<p><u>Packed Bed Scrubber No. 2 (PBS-A2):</u>  Manufacturer: Robertson Technologies  Model: RT-95KPBS  Air Flow: 95,000 cfm  Pressure Drop: 1 to 6 inches  Odor Control Eff: 85%</p> <p><u>Venturi Scrubber No. 1 (VS1):</u>  Manufacturer: Robertson Technologies  Model: RT-24KVS  Air Flow: 24,000 cfm  Pressure Drop: ≥4 inches</p> <p><u>Two-Stage Scrubber System No. 2 (C2):</u>  <u>Venturi Scrubber:</u>  Manufacturer: Robertson Technologies  Model: RT-12KVS  Air Flow: 12,000 cfm  Pressure Drop: ≥4 inches</p> <p><u>Packed Bed Scrubber:</u>  Manufacturer: Robertson Technologies  Model: RT-12KBPS  Air Flow: 12,000 scfm  Pressure Drop: 1 to 6 inches  Odor Control Eff: 85%</p>
4	<p><u>Boiler 1:</u>  Manufacturer: Cleaver-Brooks  Model: CBEX Elite  Rated Capacity: 35.7 MMBtu/hr input  Fuel: Natural Gas</p> <p><u>Boiler 2:</u>  Manufacturer: Cleaver-Brooks  Model: CBEX Elite  Rated Capacity: 35.7 MMBtu/hr input  Fuel: Natural Gas</p> <p><u>Boiler 3:</u>  Manufacturer: Cleaver-Brooks  Model: CBEX Elite  Rated Capacity: 36.7 MMBtu/hr (NG) input  or 37.4 MMBtu/hr (DG) input  Fuel: Natural Gas and  Digester Gas</p>	<p>Low-NO<sub>x</sub> and Low-CO burners</p> <p>Low-NO<sub>x</sub> and Low-CO burners</p> <p>Low-NO<sub>x</sub> and Low-CO burners</p>
5	<p><u>Emergency Engine:</u>  Manufacturer: Cummins  Model: C650N6  Capacity: 872 bhp  Fuel: Natural Gas</p>	<p>None</p>
6	<p><u>Anaerobic Digester</u>  Max Digester gas generation: 460,000 scf/day  Average gas generation: 233,000 scf/day</p>	<p><u>Biogas Flare:</u>  Rated Capacity: 20,000 scf/hr  Fuel: Digester Gas</p>

## 2 Facility-Wide Conditions

### Fugitive Dust

- 2.1** 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 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.
- 2.2** The permittee shall monitor and maintain records of the frequency and the method(s) used (e.g., water, chemical dust suppressants) to reasonably control fugitive dust emissions.
- 2.3** The permittee shall maintain records of all fugitive dust complaints received. The permittee shall take appropriate corrective action as expeditiously as practicable after receipt of a valid complaint. The records shall include, at a minimum, the date that each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.
- 2.4** The permittee shall conduct a quarterly facility-wide inspection of potential sources of fugitive dust emissions, during daylight hours and under normal operating conditions to ensure that the methods used to reasonably control fugitive dust emissions are effective. If fugitive dust emissions are not being reasonably controlled, the permittee shall take corrective action as expeditiously as practicable. The permittee shall maintain records of the results of each fugitive dust emissions inspection. The records shall include, at a minimum, the date of each inspection and a description of the following: the permittee's assessment of the conditions existing at the time fugitive emissions were present (if observed), any corrective action taken in response to the fugitive dust emissions, and the date the corrective action was taken.

### Odors

- 2.5** 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, in accordance with IDAPA 58.01.01.775.

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

## **Visible Emissions**

- 2.7** 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 the test methods and procedures contained in IDAPA 58.01.01.625. These provisions shall not apply when the presence of uncombined water, nitrogen oxides, and/or chlorine gas is the only reason for the failure of the emission to comply with this permit condition.
- 2.8** The permittee shall conduct a quarterly 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.

## **Fuel Burning Equipment**

- 2.9** The permittee shall not discharge to the atmosphere from any fuel-burning equipment with a maximum rated input of ten million BTU's per hour or more, PM in excess of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume for gas.

## **Reports and Certifications**

- 2.10** Any reporting required by this permit, including but not limited to, records, monitoring data, supporting information, requests for confidential treatment, notifications of intent to test, testing reports, or compliance certifications, 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. Any reporting required by this permit shall be submitted to the following address:

Air Quality Permit Compliance  
Twin Falls Regional Office  
Department of Environmental Quality  
650 Addison Avenue West, Suite 100  
Twin Falls, ID 83301  
Phone: (208) 736-2190  
Fax: (208) 736-2194



## **Incorporation of Federal Requirements by Reference**

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

- Standards of Performance for New Stationary Sources (NSPS), 40 CFR Part 60, Subpart Dc.
- Standards of Performance for New Stationary Sources (NSPS), 40 CFR Part 60, Subpart JJJJ
- National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63, Subpart ZZZZ

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

## 3 Byproducts Processing

### 3.1 Process Description

Byproducts processing involves the processing and drying of blood to produce blood meal and the processing of carcass portions used to produce meat and bone meal (MBM) and inedible tallow. Byproducts from the packing plant are processed through a steam-heated continuous cooker, where beef fat/tallow is separated from meat and bone meal (MBM). Blood from the beef packing plant is processed in a 4.5 MMBtu/hr natural gas-fired blood dryer.

PBS-A1 will primarily serve the blood management operations, consisting of the blood dryer, the centrifuge, the coagulator, and the blood tank. Exhaust air from these facilities will be treated in a venturi scrubber and a packed bed scrubber in series (Two-Stage Scrubber System No. 1), before combining with room air and being treated in the 95,000 cfm PBS-A1 packed bed scrubber to remove particulates and for odor control.

PBS-A2 will support activities associated with MBM and inedible tallow production. One byproducts air stream, from screening, hammer mill, conveyors and surge bins will pass through a cyclone separator. Air from the grinding room will be added to this air stream, which will then be treated in a venturi scrubber. Exhaust air created by the continuous inedible byproducts system including presses and centrifuges will be treated in a venturi scrubber and a packed bed scrubber in series (Two-Stage Scrubber System No. 2). This air stream will combine with 59,000 cfm room air and an additional venturi scrubber air (VS1) to then be routed to the 95,000 cfm PBS-A2 packed bed scrubber to remove particulates and for odor control.

### 3.2 Control Device Descriptions

**Table 3.1 Byproducts Processing Description**

Emissions Units / Processes	Control Devices	Emission Points
<p><u>Blood Management:</u> Blood Coagulator, blood dryer, blood centrifuge, blood tank</p> <p>Blood Dryer:            Rated Capacity: 4.5 MMBtu/hr            Max. production: 920 T/yr blood meal            Fuel: Natural Gas</p>	<p><u>Packed Bed Scrubber No. 1 (PBS-A1):</u>            Manufacturer: Robertson Technologies            Model: RT-95KPBS            Air Flow: 95,000 cfm            Pressure Drop: 1 to 6 inches            Odor Control Eff: 85%</p> <p><u>Two-Stage Scrubber System No. 1 (C1):</u>  <u>Venturi Scrubber:</u>            Manufacturer: Robertson Technologies            Model: RT-12KVS            Air Flow: 12,000 cfm            Pressure Drop: ≥4 inches</p> <p><u>Packed Bed Scrubber:</u>            Manufacturer: Robertson Technologies            Model: RT-12KPBS            Air Flow: 12,000 scfm            Pressure Drop: 1 to 6 inches            Odor Control Eff: 85%</p>	<p>Packed Bed Scrubber No. 1 (PBS-A1) Exhaust Stack</p>
<p><u>Byproducts Processing:</u> Screening, grinding, pressing, centrifuges, screws, heat exchangers, cookers</p> <p>Max. production: 12,155 T/yr meat and bone meal (MBM)</p>	<p><u>Packed Bed Scrubber No. 2 (PBS-A2):</u>            Manufacturer: Robertson Technologies            Model: RT-95KPBS            Air Flow: 95,000 cfm            Pressure Drop: 1 to 6 inches            Odor Control Eff: 85%</p> <p><u>Venturi Scrubber No. 1 (VS1):</u>            Manufacturer: Robertson Technologies            Model: RT-24KVS            Air Flow: 24,000 cfm            Pressure Drop: ≥4 inches</p> <p><u>Two-Stage Scrubber System No. 2 (C2):</u>  <u>Venturi Scrubber:</u>            Manufacturer: Robertson Technologies            Model: RT-12KVS            Air Flow: 12,000 cfm            Pressure Drop: ≥4 inches</p> <p><u>Packed Bed Scrubber:</u>            Manufacturer: Robertson Technologies            Model: RT-12KBPS            Air Flow: 12,000 scfm            Pressure Drop: 1 to 6 inches            Odor Control Eff: 85%</p>	<p>Packed Bed Scrubber No. 2 (PBS-A2) Exhaust Stack</p>

## Emission Limits

### 3.3 Emission Limits

The emissions from the Blood Management and Byproduct Processing stacks shall not exceed any corresponding emissions rate limits listed in Table 3.2.

**Table 3.1 Byproducts Processing Emission Limits<sup>(a)</sup>**

Source Description	PM <sub>2.5</sub> /PM <sub>10</sub> <sup>(b)</sup>		SO <sub>2</sub>		NO <sub>x</sub>		CO		VOC	
	lb/hr <sup>(c)</sup>	T/yr <sup>(d)</sup>	lb/hr <sup>(c)</sup>	T/yr <sup>(d)</sup>	lb/hr <sup>(c)</sup>	T/yr <sup>(d)</sup>	lb/hr <sup>(c)</sup>	T/yr <sup>(d)</sup>	lb/hr <sup>(c)</sup>	T/yr <sup>(d)</sup>
Blood Management	0.13	0.56	0.01	0.03	0.44	1.92	0.37	1.62	0.03	0.11
Byproducts Processing	0.10	0.43	-	-	-	-	-	-	0.21	0.91

- In absence of any other credible evidence, compliance is ensured by complying with permit operating, monitoring, and record keeping requirements.
- Particulate matter with an aerodynamic diameter less than or equal to a nominal two point five (2.5) and ten (10) micrometers, including condensable particulate as defined in IDAPA 58.01.01.006.
- Pounds per hour, as determined by a test method prescribed by IDAPA 58.01.01.157, EPA reference test method, continuous emission monitoring system (CEMS) data, or DEQ-approved alternative.
- Tons per any consecutive 12-calendar month period.

### 3.4 Opacity Limit

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

## Operating Requirements

### 3.5 Production Limits

- The production of the meat and bone meal (MBM) produced in final product weight shall not exceed 33 T/day.
- The production of the blood meal produced in final product weight shall not exceed 3 T/day.

### 3.6 Monitoring Equipment

The permittee shall maintain and operate, in accordance with manufacturer specifications, the following equipment:

- Differential pressure monitors for each venturi scrubber and packed bed scrubber;
- pH and ORP analyzers for each packed bed scrubber;
- Recycled scrubber solution flow rate monitor for each venturi scrubber and packed bed scrubber.

### 3.7 Venturi Scrubbers

- All venturi scrubbers shall be operated and maintained following manufacturers specifications;
- The pressure drop across each venturi scrubber shall be a minimum of 4-inches of water column.

- The flow rate of the recycled scrubber solution shall be greater than or equal to 96 gpm in VS1.
- The flow rate of the recycled scrubber solution shall be greater than or equal to 48 gpm in the venturi scrubbers in C1 and C2.
- Whenever the pressure drop across the venturi scrubber is lower than the minimum limit, the permittee shall take corrective action within a reasonable time, but no longer than twenty-four (24) hours from discovery of the deviation, to bring the pressure drop back within the allowable range. Deviations from this minimum operating limit shall not constitute a violation of this permit, unless the permittee fails to take corrective action or an emission standard prescribed in this permit is exceeded. DEQ may consider the frequency, duration, or magnitude of the deviations to determine if additional action is required.

### **3.8 Packed Bed Scrubbers**

- All packed bed scrubbers shall be operated and maintained following manufacturers specifications;
- The pressure drop across each packed bed scrubber shall be 1 to 6 inches of water column.
- The flow rate of the recycled scrubber solution shall be greater than or equal to 950 gpm in PBS-A1 and PBS-A2.
- The flow rate of the recycled scrubber solution shall be greater than or equal to 120 gpm in the packed bed scrubbers in C1 and C2.
- Whenever the pressure drop across the packed bed scrubber is outside the allowable range, or the scrubbing media flow rate is outside the allowable range, the permittee shall take corrective action within a reasonable time, but no longer than twenty-four (24) hours from discovery of the deviation, to bring the pressure drop or scrubbing media flow rate back within the allowable range. Deviations from this allowable operating range shall not constitute a violation of this permit, unless the permittee fails to take corrective action or an emission standard prescribed in this permit is exceeded. DEQ may consider the frequency, duration, or magnitude of the deviations to determine if additional action is required.

## **Monitoring and Recordkeeping Requirements**

### **3.9 Production Limits Monitoring**

Each calendar day, the permittee shall monitor and record the production of the meat and bone meal (MBM) and the Blood meal for the previous day in tons per day to demonstrate compliance with the Production Limits permit condition.

### **3.10 Venturi Scrubber Monitoring Requirement**

The permittee shall monitor and record the following requirements for each venturi scrubber at least once every four hours when operating:

- The pressure drop in inches of water;
- The flow rate of the recycled scrubber solution in gpm to the scrubber.

### **3.11 Packed Bed Scrubber Monitoring Requirement**

The permittee shall monitor and record the following requirements for each packed bed scrubber at least once every four hours when operating:

- pH levels;
- The pressure drop in inches of water;
- The flow rate of the recycled scrubber solution in gpm to the scrubber.

## 4 Boilers

### 4.1 Process Description

Steam will heat and clean beef packing process equipment and byproducts processing equipment. Three gas-fired boilers provide the required steam load for the facility.

### 4.2 Control Device Descriptions

**Table 4.1 Boilers Description**

Emissions Units / Processes		Control Devices	Emission Points
<u>Boiler 1:</u> Manufacturer: Cleaver-Brooks Model: CBEX Elite Rated Capacity: 35.7 MMBtu/hr Fuel: Natural Gas		Low-NO <sub>x</sub> and Low-CO burners Economizer	Boiler 1 Exhaust Stack
<u>Boiler 2:</u> Manufacturer: Cleaver-Brooks Model: CBEX Elite Rated Capacity: 35.7 MMBtu/hr input Fuel: Natural Gas		Low-NO <sub>x</sub> and Low-CO burners Economizer	Boiler 2 Exhaust Stack
<u>Boiler 3:</u> Manufacturer: Cleaver-Brooks Model: CBEX Elite Rated Capacity: 36.7 MMBtu/hr (NG) or 37.4 MMBtu/hr (DG) Fuel: Natural Gas and Digester Gas		Low-NO <sub>x</sub> and Low-CO burners	Boiler 3 Exhaust Stack

## Emission Limits

### 4.3 Emission Limits

The emissions from the boiler stacks shall not exceed any corresponding emissions rate limits listed in Table 4.2.

**Table 4.2 Boiler Emission Limits<sup>(a)</sup>**

Source Description	PM <sub>2.5</sub> /PM <sub>10</sub> <sup>(b)</sup>		SO <sub>2</sub>		NO <sub>x</sub>		CO		VOC	
	lb/hr <sup>(c)</sup>	T/yr <sup>(d)</sup>	lb/hr <sup>(c)</sup>	T/yr <sup>(d)</sup>	lb/hr <sup>(c)</sup>	T/yr <sup>(d)</sup>	lb/hr <sup>(c)</sup>	T/yr <sup>(d)</sup>	lb/hr <sup>(c)</sup>	T/yr <sup>(d)</sup>
Boiler #1	0.27	1.17	0.05	0.23	1.25	5.47	0.67	2.92	0.13	0.56
Boiler #2	0.27	1.17	0.05	0.23	1.25	5.47	0.67	2.92	0.13	0.56
Boiler #3 – NG <sup>e</sup>	0.28	1.21	0.05	0.24	1.28	5.63	0.69	3.01	0.13	0.58
Boiler #3 – DG <sup>e</sup>	0.26	0.58	3.04	6.75	0.46	1.02	0.23	0.52	0.07	0.15

- In absence of any other credible evidence, compliance is ensured by complying with permit operating, monitoring, and record keeping requirements.
- Particulate matter with an aerodynamic diameter less than or equal to a nominal two point five (2.5) and ten (10) micrometers, including condensable particulate as defined in IDAPA 58.01.01.006.
- Pounds per hour, as determined by a test method prescribed by IDAPA 58.01.01.157, EPA reference test method, continuous emission monitoring system (CEMS) data, or DEQ-approved alternative.
- Tons per any consecutive 12-calendar month period.
- Boiler 3 can combust either Natural Gas (NG) or Digester Gas (DG). Note that if Boiler 3 is combusting DG, then the flare would not be operating. Conversely, when Boiler 3 is combusting NG, then the flare would be operating to dispose of DG. This table includes emission rates for Boiler 3 for both combustion scenarios.

#### **4.4 Opacity Limit**

Emissions from the boiler stacks, or any other stack, vent, or functionally equivalent opening associated with the boilers, 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**

#### **4.5 Fuel Type**

Boilers 1 and 2 shall be fueled with natural gas exclusively. Boiler 3 shall be fueled with natural gas or biogas from the anaerobic digester.

### **Monitoring and Recordkeeping Requirements**

#### **4.6 Fuel Records**

In accordance with 40 CFR 60.48c(g)(1), the permittee shall record and maintain records of the amount of natural gas and biogas combusted during each operating day; or in accordance with 40 CFR 60.48c(g)(2), the permittee may elect to record and maintain records of the amount of each fuel combusted during each calendar month; or in accordance with 40 CFR 60.48c(g)(3), the permittee may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

#### **4.7 Recordkeeping Time Length**

In accordance with 40 CFR 60.48c(i), the permittee shall maintain all records required for a period of two years following the date of such record.



## 5 Emergency Engine

### 5.1 Process Description

The facility operates a natural gas-fired 650 kW Cummins emergency engine to provide electricity in case of power outages.

### 5.2 Control Device Descriptions

**Table 5.1 Emergency Engine Description**

Emissions Units / Processes	Control Devices	Emission Points
<b>Emergency Engine:</b> Manufacturer: Cummins Model: C650N6 Capacity: 872 bhp Fuel: Natural Gas	None	Emergency Engine exhaust stack

## Emission Limits

### 5.3 Opacity Limit

Emissions from the Emergency Engine stack, or any other stack, vent, or functionally equivalent opening associated with the Emergency Engine, 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.

### 5.4 Emission Standards

In accordance with 40 CFR 60.4233, the permittee must comply with the emission standards in Table 1 to the Subpart for the emergency IC engine.

**Table 5.2 Table 1 to Subpart JJJJ of Part 60 - NO<sub>x</sub>, CO, and VOC Emission Standards for Stationary Emergency Engines > 25HP**

Engine type and fuel	Maximum engine power	Manufacture date	Emission Standards <sup>(a)</sup>					
			g/hp-hr			ppmvd at 15% O <sub>2</sub>		
			NO <sub>x</sub>	CO	VOC <sup>(b)</sup>	NO <sub>x</sub>	CO	VOC <sup>(b)</sup>
Non-Emergency SI Lean Burn Natural Gas and LPG	500≤HP<1,350	7/1/2010	1.0	2.0	0.7	82	270	60

- Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/hr-hr or ppmvd at 15 percent O<sub>2</sub>.
- For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

## **Operating Requirements**

### **5.5 Fuel Type**

The emergency IC engine shall be fueled with natural gas exclusively.

### **5.6 Lifetime Operation and Maintenance**

In accordance with 40 CFR 60.4234, the permittee shall operate and maintain a stationary SI ICE that achieves the emission standards as required in 40 CFR 60.4233(e) over the entire life of the engine.

### **5.7 Hours of Operation**

In accordance with 40 CFR 60.4243(d), the permittee shall operate the emergency engine according to the following requirements. In order for the engine to be considered an emergency stationary ICE under the subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year is prohibited. If the permittee does not operate the engines according to the following requirements, the engines will not be considered emergency engines under the subpart and must meet all requirements for non-emergency engines.

- There is no time limit on the use of emergency stationary ICE in emergency situations.
- The permittee may operate the emergency stationary ICE for any combination of the purposes specified below for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed below counts as part of the 100 hours per calendar year allowed.
  - Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Administrator 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 ICE beyond 100 hours per calendar year.
  - Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.
  - Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.
- Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

## Monitoring and Recordkeeping Requirements

### 5.8 Maintenance Records

In accordance with 40 CFR 60.4243(a)(1), the permittee shall install a certified engine and operate and maintain the engine according to the manufacturer's emission-related written instructions. The permittee must keep records of conducted maintenance but no performance testing is required.

### 5.9 Records

In accordance with 40 CFR 60.4245(a), the permittee shall keep records of the following information:

- All notifications submitted to comply with the subpart and all documentation supporting any notification;
- Maintenance conducted on the engine;
- Documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR Parts 90, 1048, 1054, and 1060, as applicable.

### 5.10 Hours of Operation Records

In accordance with 40 CFR 60.4245(b), the permittee shall keep records of the hours of operation of the engine.

## Reporting Requirements

### 5.11 General Provisions of 40 CFR 60

In accordance with 40 CFR 60.4246, the permittee shall comply with the following applicable General Provisions of 40 CFR 60:

**Table 5.3 Table 3 to Subpart JJJJ of Part 60—Applicability of General Provisions to Subpart JJJJ**

General Provision Citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4248.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4245.
§60.8	Performance tests	Yes	Except that §60.8 only applies to owners and operators who are subject to performance testing in subpart JJJJ.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	Yes	Requirements are specified in subpart JJJJ.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	No	
§60.14	Modification	Yes	

<b>General Provision Citation</b>	<b>Subject of citation</b>	<b>Applies to subpart</b>	<b>Explanation</b>
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

## 6 Anaerobic Digester

### 6.1 Process Description

The facility uses an anaerobic digester as part of their wastewater treatment system. A byproduct of anaerobic digester is biogas in the form of methane gas. At full operation (600 head per day), average daily biogas production is approximately 233,000 scf. The maximum amount of biogas produced in a day is 460,000 cubic feet of biogas. Biogas will also be burned as fuel in Boiler 3. A flare serves as backup to combust untreated biogas if the biogas boiler is not operating.

### 6.2 Control Device Descriptions

Table 6.1 Anaerobic Digester Description

Emissions Units / Processes	Control Devices
<u>Anaerobic Digester</u> Max Digester gas generation: 460,000 scf/day Average gas generation: 233,000 scf/day	<u>Biogas Flare:</u> Rated Capacity: 20,000 scf/hr Fuel: Digester Gas

### Emission Limits

#### 6.3 Biogas H<sub>2</sub>S Concentration Limit

The concentration of hydrogen sulfide (H<sub>2</sub>S) in the biogas entering the flare or combusted in Boiler 3 shall not exceed 1,110 parts per million by volume (ppmv).

### Operating Requirements

#### 6.4 Biogas Combustion

All biogas generated from the anaerobic digester shall be combusted in the flare or in Boiler 3.

#### 6.5 Biogas Production Limit

Biogas production from the anaerobic digester that is combusted in the flare or in Boiler 3 shall not exceed 460,000 standard cubic feet per day and 85,045,000 standard cubic feet per year.

#### 6.6 Flare Ignition System

A flame shall be present at all times when combustible gases are vented through the flare. The outlet of the flare shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare.

### Monitoring and Recordkeeping Requirements

#### 6.7 H<sub>2</sub>S Monitoring

The permittee shall install, calibrate, maintain, and operate an H<sub>2</sub>S gas monitor that shall be placed downstream of the digester, and upstream of the boiler, and biogas flare, to measure the H<sub>2</sub>S concentrations in the biogas produced by the anaerobic digester. The monitor shall be installed in accordance with the manufacturer specifications. When conducting H<sub>2</sub>S monitoring Draeger® tubes, or equivalent, may be used to collect a sample in lieu of the H<sub>2</sub>S monitor.

Calibration of the H<sub>2</sub>S monitor shall be performed and recorded in accordance with the O&M manual and no less frequently than semi-annually if the meter is in service. If the meter is out of service, the meter must be cleaned and calibrated before being put into service.

Gas checks must be conducted weekly for new H<sub>2</sub>S analyzers, and an acceptable gas check is an analyzer response that is  $\pm 20\%$  of a known concentration. If gas checks are within the  $\pm 20\%$  range for four consecutive weeks, then the frequency of gas checks can be reduced to monthly. If four consecutive monthly gas checks are within the acceptable range, then the frequency can be reduced to semi-annually. If any gas check response is outside the  $\pm 20\%$  range, then the frequency would start over at weekly.

- A *gas check* is defined as an introduction of a known concentration of gas to the analyzer system prior to any adjustment being made to the analyzer response and recording the system response. A gas check will identify if the analyzer system is maintaining accuracy over time, and determine if gas checks and calibration frequency should be increased or decreased.

The measured H<sub>2</sub>S concentrations from the H<sub>2</sub>S monitor shall be recorded at least once per week in units of ppmv.

Monitoring and recordkeeping of H<sub>2</sub>S concentrations shall occur weekly during operation of the digester. Monthly monitoring may be conducted in lieu of weekly monitoring, provided that 24 consecutive weeks of monitoring show that the measured H<sub>2</sub>S concentration does not equal or exceed 90% of the H<sub>2</sub>S concentration limit in this permit. If any measured H<sub>2</sub>S concentration during monthly monitoring equals or exceeds 90% of the H<sub>2</sub>S concentration limit, then the monitoring frequency shall revert to weekly until 24 consecutive weeks of monitoring do not equal or exceed 90% of the H<sub>2</sub>S concentration limit. Records of this information shall be maintained on site and be made available to DEQ representatives upon request and in accordance with the General Provisions.

## 6.8 Operations and Maintenance Manual

The permittee shall keep an Operations and Maintenance (O&M) manual, which discusses the operation of the digester and boilers and describes the procedures that will be followed to maintain the anaerobic digester and boilers in good working order and assure operation as efficient as practical for the boilers. The procedures and specifications described in the O&M manual shall address, at a minimum, the following topics:

### Biogas Flow-rate Monitor

- Standard operational procedure for flow-rate sampling,
- Frequency and method of calibration,
- Flow rate measurement range, and

### H<sub>2</sub>S Monitor

- Standard operational procedure for H<sub>2</sub>S concentration sampling,
- Frequency and method of calibration,
- H<sub>2</sub>S concentration measurement range, and

### Pilot Flame Detector (if applicable)

- Method of ensuring continuous operation,
- Procedure for pilot flame re-ignition

### Automatic Ignition System (if applicable)

- Method of gas detection

### Collection of Biogas

- Procedures for inspection the anaerobic lagoon and biogas collection system for leaks semiannually. Procedures for determining leaks into or out of the lagoon, such as monitoring O<sub>2</sub> concentration in the biogas.

The O&M manual shall be periodically monitored and the parameters listed above be recorded no less frequently than once per calendar month.

The contents of the O&M manual shall be based on manufacturer's specifications for each piece of equipment. A copy of the manufacturer's recommendations shall be included with the O&M manual, and both shall be made available to DEQ representatives upon request.

Any changes to the O&M Manual shall be submitted to DEQ within 15 days of the change.

### **6.9 Biogas Combustion Monitoring**

The permittee shall monitor and record the total biogas flow rate on a daily basis in units of standard cubic feet per day, and calculate a rolling 12-month average of standard cubic feet per year.

Unless an alternative monitoring and recordkeeping method is approved by DEQ, the permittee shall comply with the following requirements to determine the quantity of biogas produced by the anaerobic digester:

- The permittee shall calibrate, maintain, and operate biogas flow meters that shall be placed before each combustion source and downstream of the anaerobic digesters. The total biogas flow will be determined by totaling the flow through each meter. The biogas flow meters shall be installed, operated, and maintained in accordance with the O&M manual and the manufacturer specifications.
- Calibration of the biogas flow meters shall be performed and recorded in accordance with the O&M manual.

## 7 General Provisions

### General Compliance

7.1 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.]

7.2 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, 5/1/1994]

7.3 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, 5/1/1994]

### Inspection and Entry

7.4 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

7.5 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, 5/1/1994]

7.6 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, 5/1/1994]

- 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, 5/1/1994]

## Performance Testing

**7.7** 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.

**7.8** 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.

**7.9** 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, 4/5/2000 and 4/11/2015]

## Monitoring and Recordkeeping

**7.10** 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, 5/1/1994]

## **Excess Emissions**

**7.11** 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, 4/5/2000]

## **Certification**

**7.12** 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, 5/1/1994]

## **False Statements**

**7.13** 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, 3/23/1998]

## **Tampering**

**7.14** 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, 3/23/1998]

## **Transferability**

**7.15** This permit is transferable in accordance with procedures listed in IDAPA 58.01.01.209.06.

[IDAPA 58.01.01.209.06, 4/11/2006]

## **Severability**

**7.16** 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, 5/1/1994]