STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

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

C.L. "Butch" Otter, Governor
John H. Tippets, Director

April 8, 2016

Terry Caviness, Director
CS Beef Packers, LLC
P.O. Box 27
Boise, ID 83707

RE: Facility ID No. 001-00323, CS Beef Packers, LLC, Kuna
Final Permit Letter

Dear Mr. Caviness:

The Department of Environmental Quality (DEQ) is issuing Permit to Construct (PTC) No. P-2015.0018 Project 61630 to CS Beef Packers, LLC located at Kuna for a proposed increase in biogas generation and an additional emergency engine. 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 November 13, 2015 and supplemental information received on December 9, 2015.

This permit is effective immediately and replaces PTC No. P-2015.0018 issued on November 10, 2015. This permit does not release CS Beef Packers, 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 Boise Regional Office, 1445 N. Orchard, Boise, ID 83706, Fax (208) 373-0287.

In order to fully understand the compliance requirements of this permit, DEQ highly recommends that you schedule a meeting with Tom Krinke, Air Quality Compliance Officer, at (208) 373-0419 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 Kelli Wetzel at (208) 373-0502 or kelli.wetzel@deq.idaho.gov to address any questions or concerns you may have with the enclosed permit.

Sincerely,

Mike Simon
Stationary Source Program Manager
Air Quality Division

MS\KW

Permit No. P-2015.0018 PROJ 61630

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AIR QUALITY

PERMIT TO CONSTRUCT

Permittee	CS Beef Packers, LLC
Permit Number	P-2015.0018
Project ID	61630
Facility ID	001-00323
Facility Location	17365 S. Cole Rd Kuna, ID 83634

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 April 8, 2016

Kelli Wetzel

Kelli Wetzel, Permit Writer

Mike Simon

Mike Simon, Stationary Source Manager

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1 Permit Scope

Purpose

1.1 This permit is a modified permit to construct (PTC). This permit modification provides for the installation and operation of an additional emergency engine, an increase in the biogas generation from the anaerobic digester and the amount of biogas routed to the boilers and flare, and relocation of the biogas flare.

[4/8/2016]

1.2 Those permit conditions that have been modified or revised by this permitting action are identified by the permit issue date citation located directly under the permit condition and on the right-hand margin.

1.3 This PTC replaces Permit to Construct No. P-2015.0018, issued on November 10, 2015.

[4/8/2016]

Regulated Sources

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

Table 1.1 Regulated Sources

Permit Section	Source	Control Equipment
3	Rendering plant Blood Dryer – 4.6 MMBtu/hr natural gas-fired Continuous Cooker – steam Meat and Bone Meal Handling	 VS1, PBS1, and PBS3 VS2, PBS2, and PBS4 VS3 and PBS4
4	Boilers 1 and 2 – 29.8 MMBtu/hr Allowable fuel type: natural gas	Low-NO_x Burners
4	Boilers 3 and 4 – 30.1 MMBtu/hr Allowable fuel types: natural gas and biogas	Low-NO_x Burners
5	Two Emergency IC engines – 149 bhp each Allowable fuel type: natural gas	None
6	Anaerobic Digester	Flare Iron Sponge when combusting biogas in Boilers 3 and 4

VS = Venturi Scrubber, PBS = Packed Bed Scrubber.

[4/8/2016]

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.

2.2 Prompt removal of earth or other stored material from streets, where practical.

2.3 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.

2.4 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.

2.5 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

2.6 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 58.01.01.776.01.

2.7 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

2.8 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.

2.9 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

2.10 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

2.11 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
Boise Regional Office
Department of Environmental Quality
1445 N. Orchard
Boise, ID 83706
Phone: (208) 373-0550
Fax: (208) 373-0287

Incorporation of Federal Requirements by Reference

2.12 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 Rendering Plant

3.1 Process Description

Byproducts from the packing plant will be processed through a steam-heated continuous cooker, where beef fat/tallow is separated from meat and bone meal (MBM). Tallow will be stored in four 30,500 gallon storage tanks prior to shipment off-site. An estimated 4.25 dry tons per hour (tph) of MBM from the cooker system will be ground and screened before an enclosed auger transfers dried MBM into two storage bins prior to shipment off-site. Process air from the grinder and screener will pass through a cyclone separator to collect MBM product. Exhaust from the process cyclone will be routed to emission controls.

Blood from the beef packing plant will be processed in a 4.5 MMBtu/hr natural gas-fired blood dryer. Dried blood meal will be separated from the dryer process air stream using two cyclone separators. Exhaust from the process cyclones will be routed to emission controls. An estimated 0.59 tph of dried blood meal will be pneumatically conveyed to a storage bin prior to shipment off-site. A bin vent filter will be installed on the dried meal storage tank, and exhaust air from the filter will be ducted inside the rendering building.

Control equipment will be used to reduce particulate matter and odors generated by the rendering process. Exhaust air from the blood dryer system will be routed to Venturi Scrubber 1 (VS1) in series with the Packed Bed Scrubber 1 (PBS1). Approximately 63,000 cfm of rendering plant ventilation air will be combined with the exhaust from PBS1 and routed to Packed Bed Scrubber 3 (PBS3).

Exhaust air from the continuous cooker, presses, centrifuge, drainer, screw conveyors, tallow polisher, and SWECO screen will be routed to Venturi Scrubber 2 (VS2) in series with Packed Bed Scrubber 2 (PBS2). Exhaust air from the MBM grinder and screener cyclone, along with 16,000 cfm of rendering plant ventilation air will be combined with the exhaust from PBS2 and routed to Packed Bed Scrubber 4 (PBS4).

3.2 Control Device Descriptions

Table 3.1 Rendering Plant Description

Emissions Units / Processes	Control Devices
Blood Dryer – 4.6 MMBtu/hr, natural gas-fired	VS1, PBS1, and PBS3
Continuous Cooker – steam	VS2, PBS2, and PBS4
Meat and Bone Meal Handling	VS3 and PBS4

VS = Venturi Scrubber, PBS = Packed Bed Scrubber.

Operating Requirements

3.3 Throughput Limits

- The throughput of the meat and bone meal (MBM) produced in final product weight shall not exceed 102 T/day.
- The throughput of the blood meal produced in final product weight shall not exceed 14 T/day.

3.4 Monitoring Equipment

The permittee shall install, 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 sensor for each packed bed scrubber.

3.5 Venturi Scrubbers

- All venturi scrubbers shall be operated and maintained following manufacturers specifications;
- The pressure drop across each venturi scrubber shall be greater than or equal to 4 inches of water column when the rendering plant is operating.

3.6 Packed Bed Scrubbers

- All packed bed scrubbers shall be operated and maintained following manufacturers specifications;
- All packed bed scrubbers shall use sodium hypochlorite (NaOCl) and sodium hydroxide (NaOH) as oxidizing agents;
- The recycled scrubber solution shall maintain a minimum residual chlorine concentration of 8 ppm and a minimum pH value of 8;
- The pressure drop across each packed bed scrubber shall be greater than or equal to 6 inches of water column when the rendering plant is processing raw material.
- The flow rate of the recycled scrubber solution shall be greater than or equal to 120 gpm in PBS1 and PBS2 and 750 gpm in PBS3 and PBS4.

3.7 Control of Cookers

In accordance with IDAPA 58.01.01.836, all exhaust from the continuous cooker shall be routed through a heat exchanger. Non-condensable gases from the heat exchangers shall be routed to a 3-stage scrubbing system (Venturi Scrubber 2, Packed Bed Scrubber 2, and Packed Bed Scrubber 4).

3.8 Control of Expellers

In accordance with IDAPA 58.01.01.837, all exhaust from the drainer, presses, and centrifuge shall be routed to a 3-stage scrubbing system (Venturi Scrubber 1, Packed Bed Scrubber 1, and Packed Bed Scrubber 3).

3.9 Control of Plant Air

In accordance with IDAPA 58.01.01.838, all areas of the rendering building where odors can be produced shall be under negative pressure when the rendering plant equipment is operating. When the rendering plant equipment is operating, all rendering building air shall be treated by one of the two 75,000 cfm packed bed scrubbers (Packed Bed Scrubber 3 or Packed Bed Scrubber 4) before being exhausted to the atmosphere.

Monitoring and Recordkeeping Requirements

3.10 Throughput Monitoring

The permittee shall monitor and record the daily throughput of meat and bone meal (MBM) and blood meal, expressed in T/day, to demonstrate compliance with the throughput limits.

3.11 Venturi Scrubber Monitoring Requirement

The permittee shall monitor and record the pressure drop in inches of water across each venturi scrubber every four hours when operating.

3.12 Packed Bed Scrubber Monitoring Requirement

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

- pH levels and residual chlorine concentration in ppm;
- The pressure drop in inches of water;
- The flow rate of the recycled scrubber solution in gpm.

4 Boilers

4.1 Process Description

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

4.2 Control Device Descriptions

Table 4.1 Boilers Description

Emissions Units / Processes	Control Devices
Boiler 1 - 29.8 MMBtu/hr heat input , natural gas-fired	Low-NO_x Burners
Boiler 2 - 29.8 MMBtu/hr heat input, natural gas-fired	Low-NO_x Burners
Boiler 3 - 30.1 MMBtu/hr heat input, natural gas or biogas fired	Low-NO_x Burners Iron Sponge when Combusting Biogas
Boiler 4 - 30.1 MMBtu/hr heat input, natural gas or biogas fired	Low-NO_x Burners Iron Sponge when Combusting Biogas

Operating Requirements

4.3 Fuel Type

Boilers 1 and 2 shall be fueled with natural gas exclusively. Boilers 3 and 4 shall be fueled with natural gas and/or biogas from the anaerobic digester.

Recordkeeping Requirements

4.4 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.

4.5 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.

Reporting Requirements

4.6 Notification Requirement

In accordance with 40 CFR 60.48c(a), the permittee shall submit notification of the date of construction or reconstruction and actual startup as provided in 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 permittee anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

5 Emergency IC Engines

5.1 Process Description

The facility will operate two natural gas-fired 100 kW Generac emergency engines to provide electricity in case of power outages.

[4/8/2016]

5.2 Control Device Descriptions

Table 5.1 Emergency IC Engine Description

Emissions Units / Processes	Control Devices
Two Emergency Engines – Generac, 149 bhp each, natural gas-fired	None

[4/8/2016]

Emission Limits

5.3 Emission Standards

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

Table 5.2 Table 1 to Subpart JJJJ of Part 60 - NO_x, CO, and VOC Emission Standards for Stationary Emergency Engines > 25HP

Engine type and fuel	Maximum engine power	Manufacture date	Emission Standards [a]					
			g/hp-hr			ppmvd at 15% O_2		
			NO_X	CO	VOC [b]	NO_X	CO	VOC [b]
Emergency	hp≥130		2.0	4.0	1.0	160	540	86

a 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_2.

b For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

[4/8/2016]

Operating Requirements

5.4 Fuel Type

Both emergency IC engines shall be fueled with natural gas exclusively.

[4/8/2016]

5.5 Lifetime Operation and Maintenance

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

5.6 Hour Meter

In accordance with 40 CFR 60.4237(b), the permittee shall install a non-resettable hour meter on both emergency IC engines.

[4/8/2016]

5.7 Hours of Operation

In accordance with 40 CFR 60.4243(d), the permittee shall operate both emergency engines according to the following requirements. In order for the engines 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.

[4/8/2016]

Monitoring and Recordkeeping Requirements

5.8 Maintenance Records

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

[4/8/2016]

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 engines;
- Documentation from the manufacturer that the engines are certified to meet the emission standards and information as required in 40 CFR Parts 90, 1048, 1054, and 1060, as applicable.

[4/8/2016]

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 each engine that is recorded through the non-resettable hour meter.

[4/8/2016]

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	
§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 will use an anaerobic digester as part of their wastewater treatment system. A byproduct of anaerobic digester is biogas in the form of methane gas. Approximately 450,000 cubic feet of biogas will be generated each day. Biogas will pass through an iron sponge to remove at least 75 percent of the hydrogen sulfide (H_2S) prior to being burned as fuel in Boilers 3 and 4. A flare will serve as backup to combust untreated biogas if both of the biogas boilers are not operating.

[4/8/2016]

6.2 Control Device Descriptions

Table 6.1 Anaerobic Digester Description

Emissions Units / Processes	Control Devices
Anaerobic Digester – Gas generation capacity of 450,000 cf/day of biogas	Flare Iron Sponge when combusting biogas in Boilers 3 and 4

[4/8/2016]

Emission Limits

6.3 Biogas H_2S Concentration Limit

The concentration of hydrogen sulfide (H_2S) in the biogas entering the flare shall not exceed 3,500 parts per million by volume (ppmv).

6.4 Biogas Flare Particulate Matter Emissions Limit

In accordance with IDAPA 58.01.01.785, particulate matter (PM) emissions from the biogas flare shall not exceed 0.2 pounds per 100 pounds of biogas burned.

Operating Requirements

6.5 Biogas Combustion

All biogas generated from the anaerobic digester shall only be combusted in the flare or in Boilers 3 and 4.

6.6 Biogas Combustion Limit

Biogas production from the anaerobic digester and combusted in either boilers 3 and 4 or the flare shall not exceed 450,000 cubic feet per day.

[4/8/2016]

6.7 Iron Sponge

All biogas must pass through an iron sponge before being combusted as fuel in Boilers 3 and 4.

6.8 Flare Ignition System

The permittee shall install, maintain, and operate a flare during operation of the anaerobic digester. 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

6.9 Biogas Combustion Monitoring

The permittee shall comply with the following requirements to determine the quantity of biogas produced by the anaerobic digesters:

- The permittee shall install, calibrate, maintain, and operate a biogas flow meter that shall be placed at the downstream of the anaerobic digester but before the split to the flare and boilers, in order to determine the total quantity of biogas combusted. The biogas flow meter shall be installed, operated, and maintained in accordance with the manufacturer O&M manual and the manufacturer specifications.
- Calibration of the biogas flow meter shall be performed and recorded in accordance with the O&M manual and the manufacturer specifications.
- The permittee shall monitor and record the total biogas flow rate on a daily basis, in units of cf/day.

6.10 Biogas H_2S Concentration Monitoring

The permittee shall comply with the following requirements to determine the concentration of H_2S in the gas stream produced by the anaerobic digester:

- Within 180 days of generating biogas in the anaerobic digester, the permittee shall use a handheld H_2S monitor or DEQ approved alternative to determine and record the H_2S concentration in the biogas prior to entering the iron sponge.
- If the initial H_2S concentration test is less than or equal to 75 percent of the H_2S concentration limit, no further testing is required. If the initial H_2S concentration is greater than 75 percent of the H_2S concentration limit, an additional test shall be conducted and recorded within 180 day of the initial test.
- The H_2S concentration test shall be conducted at worst-case normal operating conditions for the production of H_2S.
- Prior to conducting the test, the permittee shall submit a protocol to DEQ for review and approval at least 30 days prior to conducting the test. The protocol shall be prepared in accordance with DEQ's Source Test Guidance Manual.
- The test result shall consist of the average three one-hour test runs. The one-hour test runs shall be conducted on separate days, and the H_2S concentration shall be recorded at a frequency of at least once every 5 minutes during each test run.

6.11 Flare Ignition System Monitoring

The permittee shall install, maintain, and operate a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an alternative equivalent device, capable of continuously detecting that the flare flame is present.

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, 5/1/94]

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, 5/1/94]

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, 5/1/94]

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;
- 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

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 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

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, 5/1/94]

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, 4/5/00]

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, 5/1/94]

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, 3/23/98]

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, 3/23/98]

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, 4/11/06]

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, 5/1/94]