



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

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

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

July 18, 2012

Jacqueline Fields, City Engineer
City of Twin Falls Waste Water Pre-Treatment Facility
324 Hansen Street E
Twin Falls, ID 83301

RE: Facility ID No. 083-00143, City of Twin Falls WWPTF, Twin Falls
Final Permit Letter

Dear Ms. Fields:

The Department of Environmental Quality (DEQ) is issuing Permit to Construct (PTC) No. P-2012.0025 Project 61036 to City of Twin Falls WWPTF located at Twin Falls for a waste water pre-treatment facility. 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 May 2, 2012.

This permit is effective immediately. This permit does not release City of Twin Falls WWPTF 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, 1363 Fillmore St. Twin Falls, ID 83301, Fax (208) 736-2194.

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 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,

A handwritten signature in black ink, appearing to read "Mike Simon".

Mike Simon
Stationary Source Program Manager
Air Quality Division

MSKW

Permit No. P-2012.0025 PROJ 61036

Air Quality

PERMIT TO CONSTRUCT

Permittee City of Twin Falls WWPTF

Permit Number P-2012.0025

Project ID 61036

Facility ID 083-00143

Facility Location 341 Hankins Road South
Twin Falls, ID 83301

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 its 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; (g) in no manner implies or suggests that the 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 July 18, 2012


Kelli Wetzel, Permit Writer


Mike Simon, Stationary Source Manager

1. PERMIT SCOPE.....	3
2. ANAEROBIC DIGESTERS NOS. 1 AND 2	4
3. CANDLESTICK FLARE	6
4. EMERGENCY IC ENGINE.....	8
5. GENERAL PROVISIONS	11

1. PERMIT SCOPE

Purpose

1.1 This is the initial permit to construct for a waste water pre-treatment facility.

Regulated Sources

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

Table 1.1 REGULATED SOURCES

Permit Section	Source	Control Equipment
2	<u>Anaerobic Digester #1</u> Storage capacity: 250,000 gallons Gas generation capacity: 278,400 scf/day <u>Anaerobic Digester #2</u> Storage capacity: 250,000 gallons Gas generation capacity: 278,400 scf/day	Candlestick Flare
3	<u>Candlestick Flare</u> Manufacturer: Varec Model: 244W Series Heat input rating: 6.96 MMBtu/hr	N/A
4	<u>Emergency IC Engine</u> Manufacturer: Cummins Model: DSGAD Maximum power rating: 324 hp Fuel: ULSD	N/A

2. ANAEROBIC DIGESTERS NOS. 1 AND 2

2.1 Process Description

The facility may operate up to two anaerobic digesters. Biogas is generated by the anaerobic digesters. The biogas is directed to the candlestick flare, mixed with atmospheric oxygen, and combusted.

2.2 Control Device Descriptions

Table 2.1 ANAEROBIC DIGESTERS DESCRIPTION

Emissions Units / Processes	Control Devices
Anaerobic Digester #1	Candlestick Flare
Anaerobic Digester #2	Candlestick Flare

Emission Limits

2.3 Odors

In accordance with IDAPA 58.01.01.776.01, the permittee shall not allow, suffer, cause, or permit the emission of odorous gases, liquids, or solids into the atmosphere in such quantities as to cause air pollution.

2.4 Biogas H₂S Concentration Limit

The average annual concentration of hydrogen sulfide (H₂S) of the biogas entering the flare shall not exceed 5,000 parts per million by volume (ppmv).

Operating Requirements

2.5 Biogas Combustion Limit

Biogas production from the two anaerobic digesters and combusted in the Candlestick Flare shall not exceed 556,800 standard cubic feet (scf) per day, based on the average scf combusted per day over any consecutive 12-month period.

2.6 Biogas Combustion

Facility generated biogas produced from the on-site anaerobic digesters shall only be combusted in the Candlestick Flare.

Monitoring and Recordkeeping Requirements

2.7 Odor Complaints

The permittee shall maintain records of all odor complaints received. The permittee shall take appropriate corrective action as expeditiously as practicable after receipt of a complaint. 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.

2.8 Biogas H₂S Concentration Monitoring

Unless an alternative monitoring and recordkeeping method is approved by DEQ, the permittee shall comply with the following requirements to determine the concentration of H₂S in the gas stream produced by the anaerobic digester:

- Within 180 days of permit issuance the permittee shall install, calibrate, maintain, and operate an H₂S gas concentration monitor that shall be placed downstream of the digesters and upstream of the flare, to measure the H₂S concentration of the biogas. The monitor shall be installed in accordance with the manufacturer operations and maintenance (O&M) manual and the manufacturer specifications.

- Calibration of the H₂S concentration monitor shall be performed no less frequently than semi-annually and recorded in accordance with the O&M manual.
- The H₂S concentrations from the monitor shall be recorded once per week.
- Monitoring and recordkeeping of H₂S 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 H₂S concentration does not equal or exceed 90% of 5,000 ppmv. If any measured H₂S concentration during monthly monitoring equals or exceeds 90% of 5,000 ppmv, then the monitoring frequency shall revert to weekly until 24 consecutive weeks of monitoring do not equal or exceed 90% of 5,000 ppmv. Records of this information shall be maintained on site and shall be made available to DEQ representatives upon request and in accordance with the Recordkeeping general provision.

2.9 Biogas Combustion Monitoring

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 digesters:

- The permittee shall install, calibrate, maintain, and operate a biogas flow meter that shall be placed at the inlet of the Candlestick Flare, 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 scf/day. Records of this information shall be maintained in accordance with the Recordkeeping General Provision.

3. CANDLESTICK FLARE

3.1 Process Description

Biogas produced from the anaerobic digesters is directed to the candlestick flare, mixed with atmospheric oxygen, and combusted.

3.2 Control Device Descriptions

Table 3.1 CANDLESTICK FLARE DESCRIPTION

Emissions Units / Processes	Control Devices	Emission Points
Candlestick Flare	N/A	Flare exhaust

Emission Limits

3.3 Emission Limits

The emissions from the Candlestick Flare stack shall not exceed any corresponding emissions rate limits listed in Table 3.2.

Table 3.2 CANDLESTICK FLARE EMISSION LIMITS^a

Source Description	PM ₁₀ ^(b)		SO ₂		NO _x		CO		VOC	
	lb/hr ^(c)	T/yr ^(d)	lb/hr ^(c)	T/yr ^(d)	lb/hr ^(c)	T/yr ^(d)	lb/hr ^(c)	T/yr ^(d)	lb/hr ^(c)	T/yr ^(d)
Candlestick Flare	0.09	0.39	8.54	37.39	0.47	2.07	2.58	11.28	0.44	1.92

- a) In absence of any other credible evidence, compliance is assured by complying with permit operating, monitoring, and record keeping requirements.
- b) Particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers, including condensable particulate as defined in IDAPA 58.01.01.006.
- c) 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.
- d) Tons per any consecutive 12-calendar month period.

3.4 Opacity Limit

Emissions from the Candlestick Flare stack, or any other stack, vent, or functionally equivalent opening associated with the Candlestick Flare, 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 Flare Ignition System

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

3.6 Permitted Fuel

To demonstrate compliance with the Emissions Limits permit condition the flare shall only combust biogas as fuel.

Monitoring and Recordkeeping Requirements

3.7 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.

3.8 Opacity Monitoring

The permittee shall conduct a quarterly inspection of the candlestick flare stack, during daylight hours and under normal operating conditions. The inspection shall consist of a see/no see evaluation for each potential source of visible emissions. If any visible emissions are present from any point of emission, the permittee shall either

- a) take appropriate corrective action as expeditiously as practicable to eliminate the visible emissions. Within 24 hours of the initial see/no see evaluation and after the corrective action, the permittee shall conduct a see/no see evaluation of the emissions point in question. If the visible emissions are not eliminated, the permittee shall comply with b).

or

- b) 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%, as measured using Method 9, for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in accordance with IDAPA 58.01.01.130-136.

The permittee shall maintain records of the results of each visible emission inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

4. EMERGENCY IC ENGINE

4.1 Process Description

A diesel-fired emergency standby IC engine powering an electrical generator is used to supply emergency backup power to the entire WWPT facility.

4.2 Control Device Descriptions

Table 4.1 IC ENGINE DESCRIPTION

Emissions Units / Processes	Control Devices	Emission Points
IC Engine	N/A	IC Engine exhaust

Emission Limits

4.3 Emission Limits

The emissions from the IC Engine stack shall not exceed any corresponding emissions rate limits listed in Table 4.2.

Table 4.2 IC ENGINE EMISSION LIMITS^a

Source Description	PM ₁₀ ^(b)		SO ₂		NO _x		CO		VOC	
	lb/hr ^(c)	T/yr ^(d)	lb/hr ^(c)	T/yr ^(d)	lb/hr ^(c)	T/yr ^(d)	lb/hr ^(c)	T/yr ^(d)	lb/hr ^(c)	T/yr ^(d)
IC Engine	0.11	0.005	0.00	0.00	2.14	0.11	1.86	0.09	1.37	0.07

- In absence of any other credible evidence, compliance is assured by complying with permit operating, monitoring, and record keeping requirements.
- 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.
- 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.

4.4 Opacity Limit

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

Operating Requirements

4.5 Fuel Oil Sulfur Content

No diesel fuel oil containing sulfur in excess of 15 ppm (0.0015% by weight) shall be burned in the IC Engine.

4.6 IC Engine Operating Limit

To demonstrate compliance with the Emissions Limits permit condition and in accordance with 40 CFR 60.4211 the IC engines shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed:

- 2 hours per week
- 100 hours per consecutive 12-months

4.7 Operation and Maintenance Requirement

In accordance with 40 CFR 60.4206, the permittee shall operate and maintain the IC engine according to the manufacturer's written instructions, or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engines.

4.8 Engine Replacement

If the facility decides to change out/replace the IC engines at the facility they shall meet the engine replacement requirements of 40 CFR 60.4208 at that time.

4.9 IC Engine Hour Meter Requirement

In accordance with 40 CFR 60.4209, the IC engine shall be equipped with a non-resettable hour meter.

4.10 Incorporation of Federal Requirements by Reference

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 III

For permit conditions referencing or cited in accordance with any document incorporated by reference (including permit conditions identified as NSPS), 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.

4.11 NSPS 40 CFR 60, Subpart A – General Provisions

The permittee shall comply with the requirements of 40 CFR 60 – General Provisions according to the requirements of 40 CFR 60, Subpart III for Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

Monitoring and Recordkeeping Requirements

4.12 IC Engine Operation Recordkeeping

In accordance with 40 CFR 60.4214, the permittee shall monitor and record operation of the IC engine in hours per week to demonstrate compliance with the IC Engine Operating Limit permit condition.

Monthly operation of the IC engines shall be determined by summing weekly operation over the previous calendar month. Consecutive 12-months operation of the IC engine shall be determined by summing the monthly operation over the previous consecutive 12 month period to demonstrate compliance with the consecutive 12-months IC Engine Operating Limit permit condition.

4.13 Sulfur Content Monitoring

The permittee shall maintain purchase records or equivalent from the manufacturer that show the sulfur content of the fuel oil delivered to the facility. Records of this information shall be kept on site for the most recent five year period and shall be made available to DEQ representatives upon request.

4.14 Operation and Maintenance Recordkeeping

The permittee shall maintain records of the operation and maintenance of the IC engine to demonstrate compliance with the Operation and Maintenance Requirement permit condition.

4.15 Opacity Monitoring

The permittee shall conduct a quarterly inspection of the IC engine stack, during daylight hours and under normal operating conditions. The inspection shall consist of a see/no see evaluation for each potential source of visible emissions. If any visible emissions are present from any point of emission, the permittee shall either

- a) take appropriate corrective action as expeditiously as practicable to eliminate the visible emissions. Within 24 hours of the initial see/no see evaluation and after the corrective action, the permittee shall conduct a see/no see evaluation of the emissions point in question. If the visible emissions are not eliminated, the permittee shall comply with b).

or

- d) 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%, as measured using Method 9, for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in accordance with IDAPA 58.01.01.130-136.

The permittee shall maintain records of the results of each visible emission inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

5. GENERAL PROVISIONS

General Compliance

5.1 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 and 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.]

5.2 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]

5.3 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

5.4 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 or 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

5.5 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]

5.6 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

- 5.7 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.
- 5.8 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.
- 5.9 Within 30 days, or up to 60 days when requested 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

- 5.10 The permittee shall maintain sufficient records to ensure compliance with all of the terms and conditions of this permit. Records of monitoring information 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 and 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

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

[IDAPA 58.01.01.130-136, 4/5/00]

Certification

- 5.12 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

- 5.13 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

- 5.14 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

- 5.15 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

- 5.16 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]