

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

In the matter of approving a new)
Air contaminant source for)
City of Wenatchee)

Notice of Construction
Order No. DE 92AQ-C426
Second Revision

To: City of Wenatchee
Department of Public Works
PO Box 19
Wenatchee, WA 98807-0519

The City of Wenatchee operates a flare and a boiler to burn gas produced by three anaerobic digesters, at the City's wastewater treatment plant (WWTP). Each of the anaerobic digesters have "pop-off" pressure release valves to release small amounts of digester gas when the pressure within the digester is too high. Due to the design of the system and the physical inability to "separate" the gas created in the digesters from the digesters themselves, normal operation, inspection, and maintenance, of the digester system releases a small amount of digester gas to the atmosphere.

The WWTP is located at 201 North Worthen Street, Wenatchee, Chelan County.

THEREFORE, it is ordered by the Department of Ecology that the City of Wenatchee's emission units, specified herein, are subject to the following conditions:

APPROVAL CONDITIONS

1 Laws and Regulations

The source will comply with all State laws and regulations, including:

- Chapter 70.94 RCW, Washington Clean Air Act.
- Chapter 173-400 WAC, General Regulations for Air Pollution Sources.
- Chapter 173-460 WAC, Controls for New Sources of Toxic Air Pollutants.

The source will comply with all federal laws and regulations.

This Order supercedes Order No. DE 92AQ-C426 First Revision; Order No. DE 92AQ-C426 First Revision is no longer in effect.

2 Potential to Emit

This project shall not exceed the following potential-to-emit of the specified air contaminants, including periods of start-up and shut-down:

Pollutant	Emissions	
Carbon Monoxide (CO)	50.5	tons per year
Nitrogen Oxides (NO _x)	3.55	tons per year
Volatile Organic Compounds (VOC)	30.3	tons per year
Sulfur Dioxide (SO ₂)	7.50	tons per year
Particulate Matter (PM ₁₀)	0.089	tons per year
Toxic Air Pollutants*		
1,3-Butadiene	109	pounds per year
Acrylonitrile	1.68	pounds per year
Chromium	0.030	pounds per year
Hydrogen Sulfide (H ₂ S)	420	pounds per year

* Toxic Air Pollutants with the potential-to-emit greater than their respective Small Quantity Emission Limit, per WAC 173-460-150, 5/20/09.

3 Legal Authority

The flare and the boiler, both installed in 1992, combust digester gas and qualified as new source of air contaminants under WAC 173-400-110, February 19, 1991, and a new source of air contaminants under WAC 173-460-040, June 18, 1991. These units were originally permitted under Order No. DE 92AQ-C426, issued September 17, 1992. An increase in the carbon monoxide emissions and other revisions, qualified as a new source of air contaminants under WAC 173-400-110, July 11, 2002, and a new source of air contaminants under WAC 173-460-040, July 21, 1998. Order No. DEAQ-C426 was superceded by Order No. de 92AQ-C426 First Revision, issued March 13, 2006. These emission units were reviewed under the legal authority of RCW 70.94.152 and the applicable laws and regulations adopted thereunder.

4 Digester Gas

- 4.1 Gas produced by the anaerobic digesters shall be combusted in either the flare or the boiler. (Note: Infrequent releases of gas directly through the digesters' pressure relief systems and due to digester inspection and maintenance are anticipated and allowed.)
- 4.2 Any excessive emissions of raw digester gas shall be reported to the Department of Ecology as soon as possible, but in no case later than twelve hours after its occurrence is detected by plant personnel, and immediate remedial measures shall be undertaken to correct the problem and prevent further emissions into the atmosphere.

4.3 The digester gas flow rate to the flare and to the boiler shall be monitored by flow indicators and recorders, which must operate continuously. Continuously, as used here, shall mean 95 percent of the time each month that digester gas is being produced, except for periods of monitoring system down-time, provided that the permittee demonstrates that the down-time was not a result of inadequate design, operation, or maintenance, or any other reasonably preventable condition, and the permittee demonstrates that any necessary repairs to the monitoring system were conducted in a timely manner.

4.4 Hydrogen sulfide in the gas at the inlet of the flare and boiler shall not exceed 0.6 pounds per hour.

5 Flare

5.1 Single flare with a flow rate of less than 200 dry standard cubic feet per minute (dscfm) of digester gas to the flare.

5.2 The flare shall either be of the shrouded ground flare type or the open type.

5.3 Flare shall operate 7,000 hours per year or less on digester gas, measured as a 12-month rolling total calculated and rolled on a monthly basis.

5.4 A flare utilizing a clean-burning supplemental fuel (ie. natural gas) shall be utilized.

5.5 The flare shall be operated according to good combustion practices, manufacturer's specifications and the Operating and Maintenance Manual required below under Condition 7.

5.6 Flare shall be equipped with a failure alarm with a digester gas supply valve shut-off system, which has been approved by Ecology, to isolate the flare from the digester gas supply line, and to notify a responsible party of the shut-down.

5.7 Visible emissions from the flare shall not exceed ten percent opacity.

6 Boiler

6.1 Boiler firing 4.712 million Btu/hr or less of digester gas.

6.2 The boiler shall be of the low-NO_x type, designed to limit excess air to prevent thermal NO_x formation.

- 6.3 Boiler shall operate 7,000 hours per year or less on digester gas, measured as a 12-month rolling total calculated and rolled on a monthly basis. There is no hourly limit on boiler operation utilizing natural gas.
- 6.4 NO_x emissions shall not exceed 1.71 pounds per hour on a 24-hour average.
- 6.5 CO emissions shall not exceed 5.0 pounds per hour on a 24-hour average.
- 6.6 The boiler shall be operated according to good combustion practices, manufacturer's specifications and the Operating and Maintenance Manual required below under Condition 7.
- 6.7 Visible emissions from the boiler shall not exceed ten percent opacity.

7 Operating and Maintenance

- 7.1 Equipment shall be operated and maintained by personnel properly trained in its operation.
- 7.2 Equipment shall be properly maintained and kept in good operating condition at all times.
- 7.3 A site specific Operating and Maintenance (O&M) Manual shall be developed and followed. Manufacturer's instructions may be referenced. O&M manual development shall be completed within 180 days after issuance of this order. The O&M manual shall be updated to reflect any modifications to the O&M procedures. The source shall be operated and maintained in accordance with the O&M manual. The source shall be properly operated and maintained. Failure to follow the requirements of the O&M manual and the adequacy of the O&M manual will be two of the factors considered by Ecology in determining whether the source is properly operated and maintained. Regular O&M records shall be kept at the source. These O&M records shall be available for inspection by Ecology, organized in a readily accessible manner, and retained for at least five (5) years. The O&M manual shall at a minimum include:
 - 7.3.1 Normal operating parameters for the emissions unit(s);
 - 7.3.2 A maintenance schedule for the emission unit(s);
 - 7.3.3 Monitoring and record keeping requirements;
 - 7.3.4 A description of the monitoring procedures; and
 - 7.3.5 Actions for abnormal control system operation.

8 Fugitive Dust

- 8.1 Fugitive dust shall be controlled by covering soil at the facility with asphalt, concrete, structures or vegetation.
- 8.2 No visible emissions from the facility shall be detectable offsite.

9 Odors

Odors emanating from the project shall be controlled to minimize such odors. In the event that odor from the project is detected beyond the property boundary of the site, Ecology shall notify the permittee of this fact. Within 90 days following such notification, the permittee shall implement remedial measures to control odor and shall report in writing to Ecology on the measures taken and their effectiveness. In the event that odor is detected beyond the property boundary following notification and this remedial action period, Ecology may include, but are not limited to, changes to pollution control equipment or practices and changes of exhaust stack configuration.

10 Testing

Regular periodic source testing is not a requirement of this Order. When a complaint investigation, visibility observations, compliance questions, or other information obtained by Ecology indicates the need to measure emissions, Ecology may require the permittee to conduct performance testing. This provision is in addition to any testing required by Ecology pursuant to WAC 173-400-105. In the event performance testing is required, sampling ports and platforms must be provided by the permittee. The ports must meet the requirements of 40 CFR, Part 60, Appendix A, Method 1. Adequate permanent and safe access to the test ports must be provided.

Ecology acknowledges that it is difficult to obtain valid results from testing the discharge of an open flare. In the event that performance testing is required, Ecology will attempt to find options other than requiring testing of the discharge of an open flare. Such options might include, but are not limited to, testing the fuel gas before it is flared or replacing the open flare with an enclosed flare.

11 General Conditions

- 11.1 **Discontinuing Operations:** It shall be grounds for rescission of this approval if physical operation is discontinued for a period of eighteen (18) months or more. Ecology may extend the 18-month period upon a satisfactory showing that an extension is justified.
- 11.2 **Compliance Assurance Access:** Access to the source by representatives of Ecology or the EPA shall be permitted upon request. Failure to allow such access is grounds for enforcement action under the federal Clean Air Act or the Washington State Clean Air Act, and may result in revocation of this Approval Order.

- 11.3 **Data Retention and Availability:** Records of all data shall be maintained in a readily retrievable manner for a period of five years and be made available at the project site to authorized representatives of Ecology upon request.
- 11.4 **Availability of Order and O&M Manual:** Legible copies of this Order and the O&M manual shall be available to employees in direct operation of the diesel electric generation equipment, and be available for review upon request by Ecology.
- 11.5 **Equipment Operation:** Operation of the emission units shall be conducted in compliance with all data and specifications submitted as part of the NOC application and in accordance with the O&M manual, unless otherwise approved in writing by Ecology.
- 11.6 **Modifications:** Any modification to an emission unit, contrary to information in the NOC application, shall be reported to Ecology at least 60 days before such modification. Such modification may require a new or amended NOC Approval Order.
- 11.7 **Activities Inconsistent with the NOC Application and this Approval Order:** Any activity undertaken by the permittee or others, in a manner that is inconsistent with the NOC application and this determination, shall be subject to Ecology enforcement under applicable regulations.
- 11.8 **Obligations under Other Laws or Regulations:** Nothing in this Approval Order shall be construed to relieve the permittee of its obligations under any local, state or federal laws or regulations.
- 11.9 **Need to halt or reduce activity not a defense:** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order.

Authorization may be modified, suspended or revoked in whole or part for cause including, but not limited to the following:

- a. Violation of any terms or conditions of this authorization;
- b. Obtaining this authorization by misrepresentation or failure to disclose fully all relevant fact.

The provisions of this authorization are severable and, if any provision of this authorization, or application of any provisions of their circumstances, and the remainder of this authorization, shall not be affected thereby.

YOUR RIGHT TO APPEAL

You have a right to appeal this Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do the following within 30 days of the date of receipt of this Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

ADDRESS AND LOCATION INFORMATION

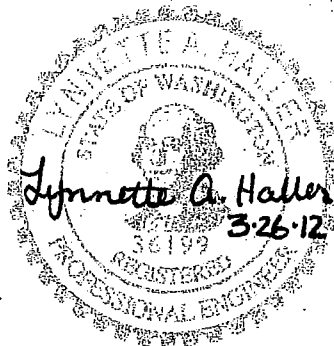
Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board 111 Israel RD SW STE 301 Tumwater, WA 98501	Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

DATED at Yakima, Washington, this 26th Day of March, 2012.

Reviewed by:

Lynnette A. Haller

Lynnette A. Haller, PE
Air Quality Program
State of Washington
Department of Ecology



Approved by:

Susan M. Billings

Susan M. Billings
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