

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

**In the matter of approving a new
air contaminant source for Public
Utility District No. 1 of Chelan
County's Stehekin Powerhouse**)
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**Proposed Decision Regarding
Notice of Construction
Order No. 08AQ-C103**

TO: Public Utility District No. 1 of Chelan County
PO Box 1231
Wenatchee, WA 98807-1231

1.0 Project Summary:

Public Utility District No. 1 of Chelan County submitted a Notice of Construction (NOC) application, on September 18, 2008, for the operation of two new 300 kW (480 BHP) diesel-fired internal combustion engines at their Stehekin Powerhouse. The Stehekin Powerhouse provides hydroelectric power to the remote community of Stehekin. The emergency generators will be used to provide emergency backup.

The project is located in Stehekin, within Section 22, Township 33 North, Range 17 East, Willamette Meridian, Chelan County, Washington.

In relation to the above, the State of Washington Department of Ecology (Ecology), pursuant to Revised Code of Washington (RCW) 70.94.152, makes the following determinations regarding the project:

1. It qualifies as a new source of air contaminants under Washington Administrative Code (WAC) 173-400-110, September 6, 2007, and a new source of toxic air pollutants under WAC 173-460-040, July 21, 1998.
2. It will be located in an area which is in attainment or unclassifiable for all criteria pollutants.
3. Allowable emissions will not delay the attainment date for an area not in attainment nor cause or contribute to a violation of any ambient air quality standard.
4. It will comply with all applicable new source performance standards, national emission standards for hazardous air pollutants, national emission standards for hazardous air pollutants for source categories and emission standards adopted under chapter 70.94 RCW.
5. It will employ Best Available Control Technology or Best Available Control Technology for Toxics, for all pollutants emitted.
6. It is not a major stationary source or major modification subject to the Prevention of Significant Deterioration permitting requirements of WACs 173-400-700 through 173-400-750.

THEREFORE, it is ordered that the project as described in said Notice of Construction Order and more specifically detailed in plans, specification and other information submitted to the Department of Ecology in reference thereto, is approved for construction, installation and operation, provided the following conditions are met:

2.0 Approval Conditions

2.1 Laws and Regulations

The proposed source shall 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 proposed source shall comply with all federal laws and regulations, including:

- Title 40 Part 60 Code of Federal Regulations (CFR) Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

This Order supersedes Coverage Order No. 08AQ-C070.

2.2 Emissions

2.2.1 This source shall not exceed the following potential-to-emit of the specified air contaminants:

Pollutant	Emissions	
Nitrogen Oxides (NO _x)	16.1	tons per year
Carbon Monoxide (CO)	0.981	tons per year
Sulfur Dioxide (SO ₂)	0.108	tons per year
Particulate Matter (PM ₁₀)	0.129	tons per year
PM _{2.5}	0.129	tons per year
Volatile Organic Compounds (VOC)	0.236	tons per year
Toxic Air Pollutants*		
1,3-Butadiene	0.976	pounds per year
Benzene	23.3	pounds per year
Benzo(a)pyrene	0.00469	pounds per year
Formaldehyde	29.4	pounds per year
Nitric Oxide (NO)	9.99	tons per year
Total PAH	0.0768	pounds per year

* Toxic air pollutants with estimated emissions greater than the Small Quantity Emission Rate listed in WAC 173-460-080(2)(e).

2.2.2 NO_x emissions from each diesel engine exhaust stack shall not exceed 43.11 grams per horsepower-hour (g/hp-hr).

2.2.3 CO emissions from each diesel engine exhaust stack shall not exceed 0.25 g/hp-h.

2.2.4 PM emissions from each diesel engine exhaust stack shall not exceed 0.033 g/hp-hr. All PM emissions are considered to be 10 microns or less in diameter.

- 2.2.5 Hydrocarbon emissions from each diesel engine exhaust stack shall not exceed 0.06 g/hp-hr.
 - 2.2.6 Visual emissions from each diesel engine exhaust stack shall be no more than 5 percent, with the exception of a ten (10) minute period after unit start-up. Visual emissions shall be measured by using the procedures contained in 40 CFR 60, Appendix A, Method 9.
- 2.3 BACT
As required by WAC 173-400-113, this project shall use Best Available Control Technology (BACT) to control criteria air contaminant emissions. BACT for this project is as follows:
- 2.3.1 The use of EPA on-road specification No. 2 distillate fuel oil with a sulfur content of 0.0015 weight percent or less.
 - 2.3.2 The use of diesel engines to power the generators that are certified to conform with EPA Tier III (40 CFR 89) for non-road engine standards.
- 2.4 T-BACT
As required in WAC 173-460-040(4)(b), this project shall use Best Available Control Technology for Toxics (T-BACT) to control toxic emissions. T-BACT for this project is the same as BACT.
- 2.5 Equipment
- 2.5.1 This project is limited to the installation and operation of two 300 kW (480 BHP) diesel-powered generator-engine sets.
 - 2.5.2 All engines used to power the generators shall be certified to 40 CFR 89 Tier III emission levels for non-road engines.
 - 2.5.3 Replacement of failed engines with like engines (same manufacturer and model family) or equivalent engines requires notification prior to installation. (Caterpillar 7CPCL08.8ESK)
 - 2.5.4 Modifications that change emission rates from this project, including replacement engines with different emission rates may require a Notice of Construction application.
 - 2.5.5 Each exhaust stack height shall be at least 14.0 feet above ground level.
 - 2.5.6 Each engine shall be equipped with a properly installed and maintained non-resettable hour meter.
 - 2.5.7 The combined total hours of operation, of the two generator sets shall not exceed 8856 hours per 12-month period.

2.5.8 The generators shall only be operated for reliability or maintenance testing and to provide emergency backup electrical power.

2.6 Emission Testing

2.6.1 Permittee will follow Caterpillar recommended diagnostic testing and maintenance procedures to ensure that each individual engine will conform to 40 CFR 89 Tier III emission specifications throughout the life of each engine.

2.6.2 At the conclusion of the manufacturer's warranty term (60 months from engine delivery date or 3,000 hours of operation), permittee shall pursue one of the following options:

2.6.2.1 Emission testing of each engine for NO_x, CO, and hydrocarbon emission rates to determine continuing compliance with the 40 CFR 89 Tier III emission standards. The testing shall be repeated every 60 months thereafter.

2.6.2.2 Re-evaluate BACT and T-BACT and health risk of the project's operations.

2.6.2.3 Satisfy the equipment manufacturer's requirements to renew or extend the emissions control equipment warranty.

2.6.2.4 Any combination of the above three options.

2.7 Operation and Maintenance

The emission units shall be properly operated and maintained. An emission unit specific operating and maintenance (O&M) manual shall be developed and followed. Manufacturers' operating instructions and design specifications for the engines, generators and associated equipment shall be included in the manual. The O&M manual shall be updated to reflect any modifications of the equipment or its operating procedures. Emissions that result from failure to follow the operating procedures contained in the O&M manual or manufacturer's operating instructions may be considered proof that the equipment was not properly installed, operated, and/or maintained. The O&M manual for the diesel electric generation units and associated equipment shall at a minimum include:

2.7.1 Testing and maintenance procedures that will ensure that each individual engine will conform to 40 CFR 89 Tier III specifications throughout the life of the engine.

2.7.2 Normal operating parameters and design specifications.

2.7.3 Operating maintenance schedule.

2.7.4 Actions for abnormal operation.

2.8 Recordkeeping and Reporting

All records, Operations and Maintenance Manual, and procedures developed under this Order shall be organized in a readily accessible manner and cover a minimum of the most

recent 60-month period. The following records are required to be collected and maintained:

- 2.8.1 Fuel receipts with amount of diesel and sulfur content for each delivery.
- 2.8.2 Monthly hours of operation for each diesel electric generator.
- 2.8.3 Upset condition log for each engine and generator that includes date, time, duration of upset, cause, and corrective action.

2.9 GENERAL CONDITIONS

- 2.9.1 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.
- 2.9.2 Legible copies of this Order and the O&M Manual shall be on-site in a location known by and available to employees in direct operation of the described equipment and available to Ecology upon request.
- 2.9.3 No outdoor burning shall be performed on-site.
- 2.9.4 This Order shall become invalid if construction is not commenced within 18 months after receipt of final approval, if construction is discontinued for a period of 18 months or more, or if construction is not complete within a reasonable time. Ecology may extend the 18-month period upon a satisfactory showing that an extension is justified.
- 2.9.5 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.
- 2.9.6 Access to the source by the United States Environmental Protection Agency or the Department of Ecology shall be permitted upon request for the purposes of compliance assurance inspections. Failure to allow access is grounds for revocation of this Order.
- 2.9.7 Operation of equipment must be conducted in compliance with all data and specifications submitted as part of the Notice of Construction application unless otherwise approved by Ecology. Any activity undertaken by the permittee, or others, in a manner which is inconsistent with the application or this Order, shall be subject to Ecology enforcement under applicable regulations.
- 2.9.8 Nothing in this Order shall be construed so as to relieve the permittee of its obligations under any state, local, or federal laws or regulations.
- 2.9.9 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.

2.9.10 This Order is valid only after payment of appropriate fee(s) required pursuant to WAC 173-455-120.

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

- I. Violation of any terms or conditions of this authorization;
- II. Obtaining this authorization by misrepresentation or failure to disclose fully all relevant facts.

The provisions of this authorization are severable and, if any provision of this authorization or application of any provision to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this authorization, shall not be affected thereby.

You have a right to appeal this permit. To appeal this you must:

- File your appeal with the Pollution Control Hearings Board within 30 days of the “date of receipt” of this document. Filing means actual receipt by the Board during regular office hours
- Serve your appeal on the Department of Ecology within 30 days of the “date of receipt” of this document. Service may be accomplished by any of the procedures identified in WAC 371-08-305(10). “Date of receipt” is defined at RCW 43.21B.001(2).

Be sure to do the following:

- Include a copy of (1) the permit you are appealing and (2) the application for the permit.
- Serve and file your appeal in paper form; electronic copies are not accepted.

1. To file your appeal with the Pollution Control Hearings Board

Mail appeal to:

The Pollution Control Hearings Board
PO Box 40903
Olympia, WA 98504-0903

OR

Deliver your appeal in person to:

The Pollution Control Hearings Board
4224 – 6th Ave SE Rowe Six, Bldg 2
Lacey, WA 98503

2. To serve your appeal on the Department of Ecology

Mail appeal to:

The Department of Ecology
Appeals Coordinator
P.O. Box 47608
Olympia, WA 98504-7608

OR

Deliver your appeal in person to:

The Department of Ecology
Appeals Coordinator
300 Desmond Dr SE
Lacey, WA 98503

3. And send a copy of your appeal to:

Sue Billings
Department of Ecology
Central Regional Office
15 West Yakima Avenue, Suite 200
Yakima, WA 98902

For additional information visit the Environmental Hearings Office Website: <http://www.eho.wa.gov>

To find laws and agency rules visit the Washington State Legislature Website: <http://www1.leg.wa.gov/CodeReviser>

DATED at Yakima, Washington, this [day] Day of [month], 2008.

Reviewed by:

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

Approved by:

Proposed Decision
Susan M. Billings
Section Manager
Air Quality Program
State of Washington
Department of Ecology