

**Fact Sheet Amendment No. 2 for
National Pollutant Discharge Elimination System Permit No.
WA002515-1
Columbia Generating Station**

PURPOSE OF THIS FACT SHEET AMENDMENT

This fact sheet amendment explains and documents the modifications to the permit issued to Columbia Generating Station (CGS) on November 1, 2014 and modified on February 8, 2016. The fact sheet that accompanied the 2014 permit and 2016 permit modification has detailed information about the wastewater treatment plant and The Energy Facility Site Evaluation Council's (EFSEC) permit decisions.

This fact sheet amendment complies with Section 173-220-060 of the Washington Administrative Code (WAC), which requires EFSEC to prepare a draft permit and accompanying fact sheet for public evaluation before issuing a National Pollutant Discharge Elimination System (NPDES) permit.

EFSEC makes the draft permit and fact sheet amendment available for public review and comment at least thirty (30) days before issuing the final permit. Copies of the draft documents for CGS, Permit No. WA0025151, are available for public review and comment from January 19, 2019 until February 22nd, 2019. For more details on preparing and filing comments about these documents, please see **Appendix A - Public Involvement Information**.

Energy Northwest reviewed the draft permit and fact sheet for factual accuracy. EFSEC corrected any errors or omissions regarding the facility's location, history, discharges, or receiving water prior to publishing this draft fact sheet for public notice.

After the public comment period closes, EFSEC will summarize substantive comments and provide responses to them. EFSEC will include the summary and responses to comments in this fact sheet amendment as **Appendix C - Response to Comments**, and publish it when issuing the final NPDES permit. EFSEC will not revise the rest of the fact sheet, but the full document will become part of the legal history contained in the facility's permit file.

EFSEC is proposing to issue this permit modification. This fact sheet amendment explains the regulatory and technical basis for the amended conditions contained in the permit.

INTRODUCTION

The Federal Clean Water Act (FCWA, 1972, and later amendments in 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One mechanism for achieving the goals of the Clean Water Act is the NPDES, administered by the federal Environmental Protection Agency (EPA). The EPA authorized the state of Washington to manage the NPDES permit program in our state. Our state legislature accepted the delegation and assigned the power and duty for conducting NPDES permitting and enforcement to EFSEC. The Legislature defined EFSEC's authority and obligations for the wastewater discharge permit program in 90.48 RCW (Revised Code of Washington).

The following regulations apply to industrial NPDES permits:

- EFSEC regulations for NPDES permits (chapter 463-76 WAC)
- Procedures EFSEC follows for issuing NPDES permits (chapter 173-220 WAC)

- Water quality criteria for surface waters (chapter 173-201A WAC)
- Water quality criteria for ground waters (chapter 173-200 WAC)
- Whole effluent toxicity testing and limits (chapter 173-205 WAC)
- Sediment management standards (chapter 173-204 WAC)
- Submission of plans and reports for construction of wastewater facilities (chapter 173-240 WAC)

These rules require any industrial facility owner/operator to obtain an NPDES permit before discharging wastewater to state waters. They also help define the basis for limits on each discharge and for performance requirements imposed by the permit.

Under the NPDES permit program and in response to a complete and accepted permit application, EFSEC must prepare a draft permit and accompanying fact sheet, and make them available for public review before final issuance. EFSEC must also publish an announcement (public notice) telling people where they can read the draft permit, and where to send their comments, during a period of thirty days (WAC 173-220-050). (See **Appendix A - Public Involvement Information** for more detail about the public notice and comment procedures). After the public comment period ends, EFSEC may make changes to the draft NPDES permit in response to comment(s). EFSEC will summarize the responses to comments and any changes to the permit in **Appendix C**.

I. GENERAL INFORMATION

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|---------------------------|---|
| Applicant | Energy Northwest |
| Facility Name and Address | Columbia Generating Station P.O. Box 968 (Mail Drop PE03) Richland, WA 99352 |
| Industry Type | Electric Services |
| Type of Facility | 40 CFR Part 423 Steam Electric Power Generating Point Source Category |
| Type of Treatment | Cooling, disinfection, neutralization (blowdown) Filtration, ion exchange (processed rad wastewater) |
| Responsible Official | Shannon E. Khounnala Energy Northwest Environmental and Regulatory Programs Manager P.O. Box 968 (Mail Drop PE03) Richland, WA 99352-0968 |

II. BACKGROUND

Energy Northwest operates the Columbia Generating Station (CGS) a 1,170- megawatt boiling water reactor that uses nuclear fission to produce heat. It is owned and operated by Energy Northwest and is located on the U.S. Department of Energy Hanford site in Benton County about 12 miles north of Richland, Washington.

The Columbia Generating Station's Standard Industrial Classification (SIC) Code is 4911, Electric Services. The North American Industry Classification System (NAICS) Code is 221113, Nuclear Electric Power Generation. The facility is subject to EPA Categorical Pretreatment Standards 40 Code of Federal Regulations (CFR) Part 423 Steam Electric Power Generating Point Source Category.

Discharge to Outfall 001 include circulating non-contact cooling water blowdown and service water system blowdown. Batch discharge of effluent from the radioactive wastewater treatment system may also be released through this outfall; however, this is an infrequent discharge, last occurring on September 19, 1998.

III. PERMIT MODIFICATION

This permit modification revises S2.A. Monitoring schedule to reflect a non-contact cooling water disinfection process modification at the facility. Additional monitoring is necessary to capture the discharge quality in the new continuous halogenation/dehalogenation process.

No other condition or requirement of the 2014 Permit or the 2016 Permit Modification is hereby affected by this amendment.

IV. DISCUSSION

Energy Northwest proposed a process modification to improve inhibition of biological fouling of the circulating water and plant service water systems at the Columbia Generating Station. These systems provide non-contact cooling water (CW) to condense the steam generated by the CGS nuclear reactor and provide indirect cooling to other plant equipment. The process modification will replace the batch cooling water halogenation process with a continuous halogenation/dehalogenation feed prior to discharge to the Columbia River. EFSEC, after a joint report review by Ecology, approved the engineering report describing the process change on October 19, 2018.

The current batch halogenation using both sodium hypochlorite and sodium bromide requires the blowdown to cease while allowing the halogen residuals to decay. This currently occurs approximately two to three times per week. Moving to the continuous halogenation injection process will improve biofouling control effectiveness. Biofouling experienced in the cooling water and plant service water systems includes the presence of an invasive Asiatic clam, various species of algae, and the bacterium *Legionella pneumophila*.

Both sodium hypochlorite and sodium bromide will continue to be used for disinfection of the open cooling water system. Two additional chemical agents, a biodispersant and

an antifoaming agent will also be added when sampling indicates that they are necessary. In addition, the facility also proposes to use sodium bisulfite as a continuous dehalogenation agent to neutralize the chlorine and bromine derivatives prior to discharge.

An additional continuous pH analyzer and a new total residual halogen (TRH) analyzer will be installed to monitor the effluent discharge line. This modification changes the pH compliance point. The new pH compliance point will be downstream of the dehalogenation tie-in on the CW blowdown line to Outfall 001. The change in process will not result in revised effluent limits for pH or TRH. These effluent limits will remain 6.5 - 9.0 and <0.1 mg/L, respectively. Rather, the frequency of the TRH monitoring will change to continuous with a requirement to report the maximum daily TRH concentration. In the event of an equipment failure, CGS will resume the batch halogenation process currently described in the discharge permit. Existing acute whole effluent toxicity (WET) limits and chronic WET testing requirements remain in effect.

V. CONCLUSION

Based on the information and documentation presented, EFSEC proposes to modify Columbia Generating Station's permit as discussed above.

APPENDIX A – PUBLIC INVOLVEMENT

APPENDIX B - YOUR RIGHT TO APPEAL

APPENDIX C - RESPONSE TO COMMENTS

APPENDIX A - PUBLIC INVOLVEMENT INFORMATION

EFSEC proposes to modify the Columbia Generating Station NPDES Permit WA002515-1. The permit modifications are described in this fact sheet amendment.

EFSEC will place a Public Notice of Draft on January 18, 2019 in the Tri-City Herald to inform the public and to invite comments on the proposed draft permit and fact sheet amendment. Interested persons are invited to submit written comments regarding the modifications.

The modified permit and related documents can be viewed on EFSEC's website: <http://www.efsec.wa.gov/CGS/Permits.html> and at the Department of Ecology Water Quality Permitting and Reporting Information System (PARIS) website at <https://fortress.wa.gov/ecy/paris/PermitLookup.aspx>. The documents are also available at the EFSEC Office for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m., weekdays. To obtain a copy or to arrange to view copies, please contact EFSEC at (360) 664-1345.

Paper documents may be viewed at the EFSEC office:
1300 S. Evergreen Park Dr. SW
Olympia, WA 98504-3172

The public may comment on the proposed permits from January 19, 2019 until February 22nd, 2019, at <http://www.efsec.wa.gov/CGS/Permits.html>.

Any interested party may comment on the draft permit within the thirty (30) day comment period to the address above. EFSEC will hold a hearing on this matter on Wednesday, February 20th, 2019 at Benton County PUD located at 2721 W 10th Ave, Kennewick, WA 99336.

Speaker sign up will begin at 4:30 PM. Staff presentations will begin at 5 PM then the floor will be open to public comment until 7 PM or last speaker, whichever comes first. These times may vary depending on public attendance.

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

EFSEC will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. EFSEC's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from EFSEC by telephone at (360) 664-1362 or by writing to the address listed above.

Appendix B - Your Right to Appeal

You have a right to appeal the modified portions of this permit only. Pursuant to WAC 463-76-063(1), a decision to issue this permit is subject to judicial review pursuant to the Administrative Procedure Act, Chapter 34.05 RCW. The Administrative Procedure Act can be found on-line at <http://apps.leg.wa.gov/RCW/default.aspx?cite=34.05>

Appendix C - Response to Comments

The public comment period for this permit extended from January 19, 2019 through 5pm on February 22, 2019. No comments were received.