

Waste Treatment and Immobilization Plant Risk Assessment Permit Modification



Public comment period

February 24 - April 9, 2020

Please submit comments

Electronically (preferred) via:

<http://nw.ecology.commentinput.com/?id=F6msi>

By U.S. Mail, or hand-delivery:

Daina McFadden
3100 Port of Benton Blvd
Richland WA 99354

Public hearing

A public hearing is not scheduled, but if there is enough interest, we will consider holding one. To request a hearing or for more information, contact:

Daina McFadden
509-372-7950
Hanford@ecy.wa.gov

Special accommodations

To request ADA accommodation including materials in a format for the visually impaired, call Ecology at 360-407-6831 or visit <https://ecology.wa.gov/accessibility>.

People with impaired hearing may call Washington Relay Service at 711.

People with speech disability may call TTY at 877-833-6341.

Public comment invited

The Washington State Department of Ecology (Ecology) is proposing an agency-initiated permit modification to the Hanford Facility Resource Conservation and Recovery Act Permit, Revision 8C.

The proposed changes affect the dangerous waste portion for the *Treatment, Storage, and Disposal of Dangerous Waste for the Waste Treatment and Immobilization Plant*, located in Part III, Operating Unit Group 10 (Permit).

The Waste Treatment Plant (WTP) is located on the Hanford Site in southeastern Washington. The plant will immobilize in glass (vitrify) 56-million gallons of dangerous radioactive and chemical waste currently stored in 177 underground storage tanks at Hanford.

The permittees are:

U.S. Department of Energy, Office of River Protection
P.O. Box 450
Richland, Washington 99352

Bechtel National, Inc.
2435 Stevens Center Place
Richland, Washington 99354

Ecology invites you to comment on the Preliminary Risk Assessment Permit Modification (8C.2020.2D), February 24 through April 9, 2020.

The proposed changes incorporate the draft Preliminary Risk Assessment and the Risk Assessment Work Plan for the Direct Feed Low-Activity Waste (DFLAW) configuration.

Risk Assessment Work Plan Supplements 2 through 5 would also be updated for incorporation into the Permit.

Background

WTP includes multiple facilities: Analytical Laboratory (Lab), Low-Activity Waste (LAW) Facility, High-Level Waste (HLW) Facility, Pretreatment Facility (PTF), Effluent Management Facility (EMF), and Balance of Facilities (BOF).

WTP will operate in two processing configurations. For near-term operations, WTP will operate in the DFLAW configuration, which requires the Lab, LAW, and EMF to become operational first to process the low-activity waste from tank farms.

In the DFLAW configuration, the waste is pretreated to remove cesium and solids before the waste is sent to the LAW facility. In this configuration, the pretreated waste will bypass the PTF and be fed directly from the tank farms to the LAW facility. The LAW facility is where the low-activity fraction of the waste will be solidified by vitrification.

The liquid effluents generated in the LAW facility and the Lab are transferred and treated at EMF, which will reduce the effluent volume by evaporation. WTP will later operate in the baseline configuration when the PTF and the High-Level Waste Facility become operational.

These draft documents will support revisions to Appendix 6.2, Risk Assessment Work Plan and Appendix 6.3, Pre-Demonstration Test Risk Assessment Report as required by Interim Compliance Schedule Item number EMF-9, and WTP Unit specific permit conditions III.10.C.11.a and III.10.C.11.b.

In 2015, Ecology provided the draft WTP Risk Assessment Work Plan and associated supplements for public review; however, the Direct Feed Low-Activity Waste configuration was not addressed in the document at that time. Since 2015, the WTP Permit has been modified to include the DFLAW configuration.

Proposed Changes

This permit modification will update and add new documents to the WTP portion of the Permit to support the Risk Assessment for the DFLAW configuration. Updates to the documents in Appendix 6.2 of the WTP portion of the Permit are necessary to ensure the DFLAW configuration has been adequately analyzed and reviewed through the Risk Assessment Work Plan.

This permit modification also provides the draft *Pre-Demonstration Test Risk Assessment for the Hanford Tank Waste Treatment and Immobilization Plant* for Ecology review, as required by Permit Condition III.10.C.11.b and Interim Compliance Schedule EMF-9 of the WTP portion of the Permit.

The draft Risk Assessment Work Plan for the Direct Feed Low Activity Waste Configuration and the Pre-Demonstration Test Risk Assessment for the Hanford Tank Waste Treatment and Immobilization Plant use the best available information, approved models, U.S. Environmental Protection Agency combustion risk assessment guidance, and conservative exposure scenarios and assumptions.

The following draft documents will be provided to support this agency-initiated permit modification to the WTP portion of the Permit:

New Documents:

- Pre-Demonstration Test Risk Assessment for the Hanford Tank Waste Treatment and Immobilization Plant

Risk Assessment Work Plan for the Direct Feed Low-Activity Waste Configuration Revised Documents:

- Emissions Study for the Hanford Tank Waste Treatment and Immobilization Plant
- Cell Emissions Estimate
- Chemical Parameters and Toxicological Inputs for the Environmental Risk Assessment for the Hanford Tank Waste Treatment and Immobilization Plant
- Hanford Tank Waste Treatment and Immobilization Plant Risk Assessment Air Quality Modeling Protocol

Reviewing the proposed changes

Ecology invites you to review and comment on this proposed agency initiated modification to Appendix 6.2, Risk Assessment Work Plan and Appendix 6.3, Pre-Demonstration Test Risk Assessment Report, of the WTP Permit. See Page 1 for comment period dates and information on how to submit comments.

Copies of the application for the proposed permit and supporting documentation will be available during the public comment period online at Ecology's website at <https://www.ecology.wa.gov/Waste-Toxics/Nuclear-waste/Public-comment-periods>. The documents will also be available at the Hanford Public Information Repositories listed on the last page.

Ecology will consider and respond to all significant comments received during the public comment period. We will document our responses and issue a response to comments document when we make our final permitting decision.



Figure 1 Effluent Management Facility



DEPARTMENT OF
ECOLOGY
State of Washington

Nuclear Waste Program
3100 Port of Benton Blvd
Richland, WA 99354

Hanford's Information Repositories and Document Review Locations

Washington

Richland

Ecology Nuclear Waste Program
Resource Center
3100 Port of Benton Blvd.
Richland, WA 99354
509-372-7950

U.S. Department of Energy
Administrative Record
2440 Stevens Drive, Room 1101
Richland, WA 99354
509-376-2530

Washington State University Tri-Cities
Department of Energy Reading Room
2770 Crimson Way, Room 101L
Richland, WA 99354
509-375-7443

Seattle

University of Washington
Suzzallo Library
P.O. Box 352900
Seattle, WA 98195
206-543-5597

Spokane

Gonzaga University
Foley Center
502 E Boone Avenue
Spokane, WA 99258
509-313-6110

Oregon

Portland

Portland State University
Millar Library
1875 SW Park Avenue
Portland, OR 97207
503-725-4542