

## Public Comment Period on Proposed Modification to Hanford Dangerous Waste Permit

# Proposed Modifications to PUREX Storage Tunnels

The U.S. Department of Energy Richland Operations Office (DOE-RL) is holding a 60-day public comment period from February 12 to April 12, 2018, to support a Class 3 Permit Modification to the [Hanford Dangerous Waste Permit](#). The modification addresses the stabilization of Tunnels 1 and 2 at the Plutonium Uranium Extraction (PUREX) Plant, until final closure decisions are made and implemented.

February 2018

U.S. Department of Energy

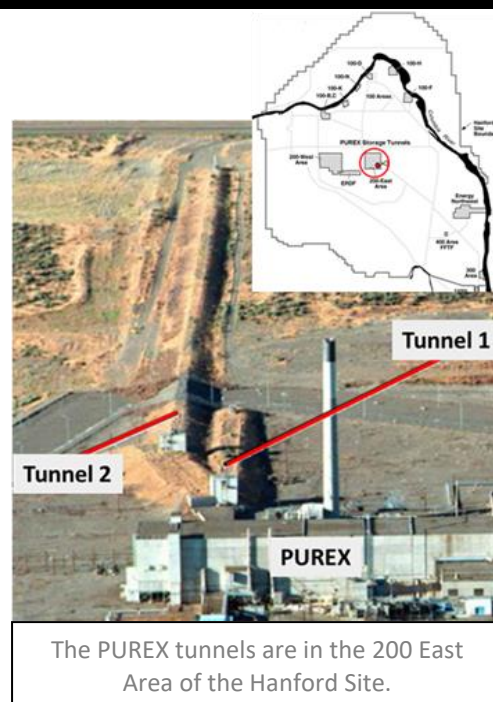
## Sequence of Class 3 Permit Modifications

As per [WAC 173-303-830](#), "Permit Changes," this Class 3 Permit Modification will go through a public review process that includes this fact sheet, newspaper advertisement and public meeting.

## PUREX Storage Tunnels Background

The PUREX Plant is located in the 200 East Area of the Hanford Site, near Richland, Washington. It was used from 1956 to 1988 to process spent nuclear reactor fuel, and recovered plutonium, uranium and other radioactive isotopes. Spent nuclear fuel is fuel that has been exposed to radiation in a nuclear reactor, usually a power plant.

In an effort to continue cold war production, a location was needed to store radioactive failed equipment. Two tunnels near PUREX were constructed in the mid-1950s (Tunnel 1) and 1960s (Tunnel 2) for the storage of waste, mostly large equipment and components. The tunnels provided a means of protecting workers, the public and the environment from exposure to radioactive residues.



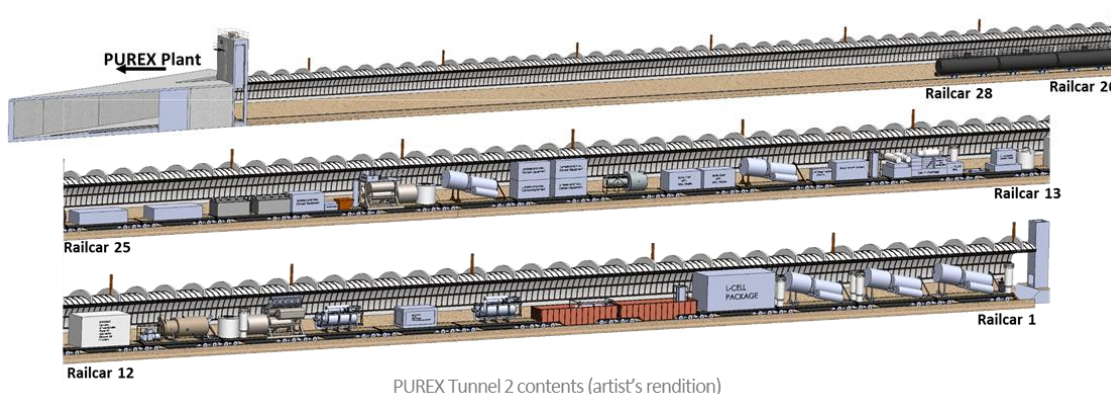
On May 9, 2017, workers discovered a collapse in a portion of Tunnel 1 and failed wood timber roof structure resulting in a hole approximately 5.8 meters (19 feet) wide by 5.2 meters (17 feet) long. The Hanford Emergency Operations Center was activated and although no evidence of release from the unit was found, an informational notification was made to the Washington State Department of Ecology (Ecology) that the [Resource Conservation and Recovery Act of 1976 \(RCRA\)](#) contingency plan was being implemented. That plan is designed to take steps necessary to minimize hazards to human health or the environment.

The collapse caused a two-day emergency response that involved notifying the public and regulatory agencies, sheltering site employees until surveys confirmed no contamination was released and filling the collapsed portion of the tunnel with soil. The immediate and thorough response actions by workers resulted in zero injuries and no release of contamination.

On May 10, 2017, Ecology issued an [Administrative Order](#) to DOE-RL, requiring Corrective Actions for Tunnel 1 and Tunnel 2. DOE-RL evaluated Tunnel 1 and addressed the threat of further failure of Tunnel 1 by filling it with engineered grout as a response action under Section J.4.5 of the Hanford Facility RCRA Permit PUREX storage tunnels contingency plan. Grout is a mixture of water, cement and sand that makes a mortar used to fill void spaces. Engineered grout is mixed with a variety of other materials to customize it for a specific project. More than 4,400 cubic yards of engineered grout filled Tunnel 1, surrounding all of the equipment

inside. Grouting of Tunnel 1 began in October and was finished in November 2017. Completion improved tunnel stability, added radiological protection and did not preclude future closure decisions or cleanup actions.

As part of the Administrative Order, DOE-RL also evaluated the structural integrity of Tunnel 2. The structural evaluation of Tunnel 2 identified a threat of potential collapse, and DOE-RL believes filling Tunnel 2 with engineered grout is also necessary to stabilize the tunnel and mitigate the risk of potential failure. Stabilizing Tunnel 2 with grout is planned as an interim closure action in this RCRA permit modification.



## Summary

The Class 3 Permit Modification Request has been submitted to Ecology, which describes the stabilization action taken for Tunnel 1, actions proposed for stabilizing Tunnel 2 and their relationship for future closure and cleanup actions. The proposed permit modification will include changes to the permit sections covering Preparedness and Prevention, Inspection Requirements, Contingency Plan, Waste Analysis Plan, Process Information, and Closure and Financial Assurance.

The permit modifications will describe the following:

- Control of rain and snow run-off and run-on
- Grout formulation (determining the mix of water, cement, sand and other materials for project needs)
- Design of the grout injection system
- Process used to inject grout and determine that voids are filled
- Confirmation that grout will not adversely react with waste stored in the tunnel
- Alternatives available for final closure
- Confirmation that final closure options are not precluded by grouting
- Coordination of final closure action with the PUREX plant under the [Comprehensive Environmental Response, Compensation, and Liability Act of 1980](#)

## Path Forward

This proposed modification includes a 60-day public comment period, along with an opportunity to learn more and provide comments at a public meeting. The public meeting will be held on Wednesday, March 14, 2018, at 5:30 p.m. at the Richland Public Library, and will include a question-and-answer session.

DOE-RL recognizes the importance of informing the public on the entire sequence of activities. In addition to information on plans to stabilize Tunnel 2, the meeting will also include information on the outcome of grouting Tunnel 1. The permittees' compliance history during the life of the permit being modified is available from Ecology's contact person.

Electronic access to the proposed permit modification and supporting documentation is available online at <http://www.hanford.gov/pageaction.cfm/calendar?IndEventId=8797>.

## How to get involved...

A 60-day public comment period will run from February 12, 2018 to April 12, 2018. The public meeting will be held on Wednesday, March 14, 2018, at 5:30 p.m. at the Richland Public Library, 955 Northgate Drive, Richland, WA. To register for the meeting's webinar go to:

**URL:** <https://attendee.gotowebinar.com/register/3881544714904416002>

**Webinar ID:** 997-328-411

The RL point of contact is Rich Buel, [Richard.buel@rl.doe.gov](mailto:Richard.buel@rl.doe.gov), (509) 376-3375.

The Ecology point of contact is Stephanie Schleif, [Stephanie.schleif@ecy.wa.gov](mailto:Stephanie.schleif@ecy.wa.gov), (509) 372-7929.

Please submit comments on the proposed changes by **April 12, 2018**, via eComments, to:



PUREX: <http://wt.ecology.commentinput.com/?id=3cRfj>

or mail to: Daina McFadden

Washington State Department of Ecology

3100 Port of Benton Boulevard

Richland, WA 99354

<http://www.hanford.gov/pageaction.cfm/calendar?IndEventId=8797>

**Electronic access is available for review at the locations listed below**

### HANFORD PUBLIC INFORMATION REPOSITORY AND RESOURCE CENTER LOCATIONS

#### Portland

Portland State University Library  
Branford Price Millar Library  
1875 SW Park Avenue  
Portland, OR 97201  
Attn: Bertrand Robinson (503) 725-4128  
Map: <http://bit.ly/1K7BfuK>

#### Richland

U.S. Department of Energy Public Reading Room  
Washington State University, Tri-Cities  
Consolidated Information Center, Room 101-L  
2770 University Drive  
Richland, WA 99352  
Attn: Janice Parthree (509) 375-7443  
Map: <http://bit.ly/1LpZKUa>

#### Ecology Nuclear Waste Program Resource Center

3100 Port of Benton Blvd. Richland, WA 99354  
Attn: Teresa Booth (509) 372-7950  
Online: <http://www.ecy.wa.gov/programs/nwp/commentperiods.htm>

#### Seattle

University of Washington  
Suzzallo Library  
4000 15<sup>th</sup> Avenue NE  
Seattle, WA 98195  
Attn: Hilary Reinert (206) 543-5597  
Map: <http://bit.ly/1QMtUog>

#### Spokane

Gonzaga University  
Foley Center Library  
East 502 Boone Avenue  
Spokane, WA 99258  
Attn: John Spencer (509) 313-6110  
Map: <http://bit.ly/1Cp0mRT>

#### Administrative Record

2440 Stevens Center Place, Room 1101  
Attn: Heather Childers (509) 376-2530  
Online: <http://pdw.hanford.gov/arpir/>

**Hanford Events Calendar:**

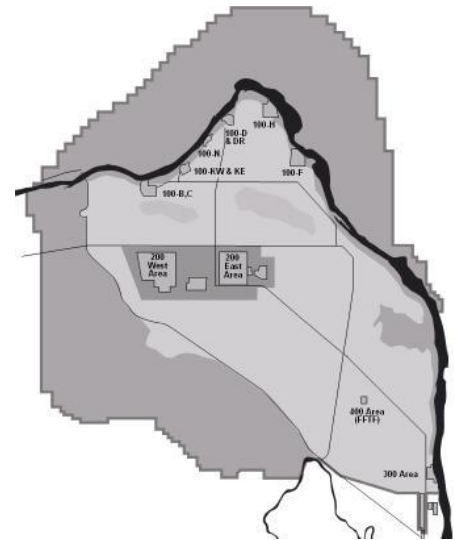
<http://www.hanford.gov/pageaction.cfm/calendar?IndEventId=8797>

**Hanford Public Comment Opportunities:**

<http://www.hanford.gov/page.cfm/Outreach/PublicCommentOpportunities>

# Hanford Public Involvement Opportunity

We want to hear from you on the proposed modification for the Hanford Sitewide Permit!



**Comment Period: February 12, 2018 – April 12, 2018**  
**Public Meeting: March 14, 2018, 5:30 p.m., Richland Public Library, 955 Northgate Drive, Richland, WA 99352**

Dangerous Waste Permit Modification Fact Sheet  
U.S. Department of Energy  
Richland Operations Office  
P.O. Box 550, H5-20  
Richland, WA 99352