



Public Comment Period on Proposed Permit Changes for Hanford Waste Encapsulation and Storage Facility

The U.S. Department of Energy, Richland Operations Office (DOE-RL) is proposing permit modifications to support ventilation stabilization and upgrades of hot cells that are no longer in use at the Waste Encapsulation and Storage Facility (WESF). We are holding a 60-day comment period, and we want your input!

December 2014

U.S. Department of Energy

Background

In the 1970s, the radioactive isotopes of the chemical elements cesium and strontium, which generate a large amount of heat, were removed from the high-level waste tanks at Hanford to reduce the temperature of the waste inside the tanks. Both elements were ultimately placed in sturdy, stainless steel containers in WESF for safe storage and monitoring. WESF stores nearly 2,000 cesium and strontium capsules in underwater pools. During operations, WESF hot cells protected workers and allowed them to safely handle radioactive materials.

Permit modifications

The proposed changes are Class 3 permit modifications to the Hanford Facility Dangerous Waste Permit Operating Unit Group 14, which regulates the storage, treatment and disposal of Hanford's dangerous and mixed dangerous waste. Large amounts of legacy contamination throughout some hot cells and the ventilation system require the stabilization of the contamination, as well as upgrades to the ventilation system. The proposed changes are necessary to support replacement of the K3 ventilation exhaust system at WESF, which is permitted under the Hanford Air Operating Permit. The current filters are beyond their design life and are deteriorating. Therefore a new system is being installed to ensure continued safe operations at WESF.

To replace the K3 ventilation system, DOE-RL must stabilize WESF hot cell contamination left over from prior waste processing activities by filling the cells with grout. The stabilization effort requires a revision to the WESF Part A Application, which details facility information, and submittal of a closure plan to detail this interim step to closure at WESF. The closure plan will address Hot Cells A through F, which are no longer operational.

Land Disposal Restriction (LDR) Treatment variance

In addition to the proposed permit modifications, DOE-RL will also submit to the Washington Department of Ecology (Ecology) in accordance with WAC 173-303-140, a request for a site-specific treatability variance from applicable LDR treatment standards for specific waste items in Hot Cells B and C. These waste items hold a small amount of floor sweepings containing strontium fluoride, processing debris and other waste material produced during the last steps of cleanup and shutdown of operations. This request will be submitted to Ecology in January 2015.

Ordinarily, this type of waste would be treated by mixing the waste material with a stabilizing agent, followed by sampling and analysis to confirm that LDR treatment standards have been accomplished. However, these materials are highly radioactive, with half-lives of about 30 years for Cesium-137 and 29 years for Strontium-90. Meeting LDR treatment requires intrusive activities and handling of this waste, increasing risk of exposure to workers and the environment and generation of additional mixed waste. In addition, the high radiological nature of the waste items interferes with laboratory analyses needed to confirm treatment was successful.

If approved, a variance will allow stabilization by an alternative treatment method of macroencapsulation of these waste items. This method uses grout to completely surround the waste, which protects human health and the environment by reducing the leachability of contaminants and minimizing waste generation and potential radiological exposure to workers. The requested treatability variance will detail the justification and protectiveness of this alternative treatment.

Class 3 Modifications are the most significant of the three modification classes and address changes that substantially alter a facility or its operations.

- Requirements:
 - Fact sheet and public notification via the Hanford email and postal mail list
 - 60-day public comment period on the permit modification request (includes public meeting)
 - 45-day public comment period on the permitting decision



Copies of the proposed permit modification and supporting documentation are available at the Administrative Record, 2440 Stevens Drive, Richland, WA. The variance request will be available in late January 2015. The permittee's compliance history during the life of the permit being modified is available from Ecology at (509) 372-7950, or email Hanford@ecy.wa.gov.

Public Comment

We want your feedback! The public comment period runs from Dec. 11, 2014 through Feb. 12, 2015. A public meeting will be held Jan. 7, 2015 at 5:30 p.m. at the Richland Public Library, 955 Northgate Drive, Richland, WA

How you can help

A 60-day public comment period on *proposed Class 3 modifications to Part III of Hanford's Dangerous Waste Permit* will run from **Dec. 11, 2014 through Feb. 12, 2015**. A public meeting will be held **Jan. 7, 2015 at 5:30 p.m., at the Richland Public Library, 955 Northgate Drive, Richland, WA**. Please submit comments by **Feb. 12, 2015** to:



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3100 Port of Benton Blvd
Richland, WA 99354
Email: Hanford@ecy.wa.gov



The documents are available for review at the Public Information Repositories listed below.

Portland State University
Government Information
Branford Price Millar Library
1875 SW Park Avenue
Portland, OR 97207-1151
Attn: Claudia Weston
(503) 725-4542

University of Washington
Suzzallo Library
Government Publications Dept.
Box 352900
Seattle, WA 98195-2900
Attn: Cass Hartnett
(206) 685-3130

U.S. Department of Energy
Public Reading Room
Washington State University, Tri Cities
Consolidated Information Ctr.,
Rm. 101-L
2770 Crimson Way
Richland, WA 99352
Attn: Janice Scarano (509) 372-7443

Gonzaga University
Foley Center Library
East 502 Boone Avenue
Spokane, WA
Attn: John Spencer
(509) 313-6110

Administrative Record and Public Information Repository:
Address: 2440 Stevens Center Place, Room 1101, Richland, WA
Phone: 509-376-2530 Web: www2.hanford.gov/arpir/

cross-ref - 1227765