



Hanford 300 Area “Plug-In” Waste Sites for Fiscal Year 2012

Annual listing of waste sites “plugged-in” to the remove, treat, and dispose remedy in the 2001 interim action Record of Decision for 300-FF-2.

The Record of Decision (ROD) for the 300-FF-2 portion of Hanford’s 300 Area remedial action issued in April 2001, authorizes the use of a “Plug-In” or “Analogous Sites” approach for including additional waste sites. This approach allows additional waste sites to be cleaned up under this ROD with certain conditions. These conditions apply to “candidate” or “newly discovered” waste sites that fit the 300-FF-2 site profile, and when the contaminant concentrations exceed the cleanup levels established in the ROD. Remove, Treat as necessary, and Dispose (RTD) is the selected remedy for these sites and cleanup work for these sites will be added to the 300 Area cleanup milestone M-16-00B.

The 300-FF-2 site profile is based on the site characteristics that were detailed in a study that evaluated remedial alternatives for waste site cleanup. These characteristics are defined by the following:

- Types of contaminants
- Types of contaminated environmental media
- Types of contaminated waste material

The 2009 Explanation of Significant Differences (ESD) to the ROD authorized that additions of plug-in and candidate sites will be documented in the administrative record. A fact sheet will be published by DOE annually to identify the plug-in and candidate sites that meet the criteria to add them to the ROD for 300-FF-2.

Two sites were added to the RTD remedy for 300-FF-2 in fiscal year 2012.

Site Code	Description
300-296	Soil contamination under the 324 Building, B-Cell. In November 2009 while performing decontamination and demolition activities in the 324 Building, a breach was discovered in the B-Cell's floor stainless steel liner. An extremely high radiation dose rate of 14,400 R/hr was measured on the floor. In November 2010 a Geoprobe was used to push two-inch diameter pipes into the soil under the B-Cell in which radiation detectors were inserted to determine the radiation dose. Dose rates in the casings were measured up to 8,900 R/hr. This extremely high radiation dose rate will require remotely operated equipment for remediation to prevent radiation exposure to workers. The preliminary characterization results suggest that the release originated at the sump in the floor and followed an expansion joint located between the cell floor slab and footer approximately 12 ft below grade.
600-386	Small battery debris site just north of the main 300 Area.

Two candidate sites were added for 300-FF-2 in fiscal year 2012.

Site Code	Description
600-352-PL	Retention process sewer from the 342 Lift Station to the 310 Retention Transfer System.
400-41	Stained soils near the 4723 Building. There is evidence of soil staining in three areas around the 4723 building, which was used to store flammable and combustible liquids.

300 Area “Plug-In” Waste Sites for Fiscal Year 2012

Background

The 300 Area is adjacent to the Columbia River and begins one mile north of the Richland city limits. The 300 Area began operations in 1943 as a fuels fabrication complex for the nine plutonium production reactors located in the 100 areas. Most of the facilities in the area were involved in the fabrication of nuclear reactor fuel elements. Also located in the 300 Area were technical and administrative functions, as well as research and development activities related to the development and fabrication of reactor fuels. Before 1973, solid waste and debris generated by these activities were disposed in a series of unlined disposal sites, called burial grounds. The burial grounds were located north and west of the 300 Area complex and some contain drummed liquid wastes. Liquid disposal trenches occupied the northeast side of the 300 area.

The 300-FF-2 Operable Unit comprises waste sites falling into four general categories: waste sites in the 300 Area industrial complex; outlying waste sites north and west of the 300 Area industrial complex; general content burial grounds;

and transuranic-contaminated burial grounds. The selected remedy in the ROD included the following components:

- Removal of contaminated soil, structures, and associated debris
- Treatment, as necessary, to meet waste acceptance criteria at an acceptable disposal facility
- Disposal of contaminated materials at the Hanford Site’s Environmental Restoration Disposal Facility; the Waste Isolation Pilot Plant in Carlsbad, New Mexico; or other facilities approved in advance by the U.S. Environmental Protection Agency (EPA)
- Recontouring and backfilling of excavated areas followed by revegetation
- Institutional controls as necessary to prevent unacceptable exposures to residual contamination

Remediation of 300-FF-2 waste sites began in 2002.



Hanford's 300 Area.

To request additional information, please contact:

Rudy Guercia
US Department of Energy
Richland Operations Office
PO Box 550, MSIN: A3-04
Richland, WA 99352
Phone: 509-376-5494, FAX 509-373-0726
Email: rudolph.guercia@rl.doe.gov

or

Tiffany Nguyen
US Department of Energy
Richland Operations Office
PO Box 550, MSIN: A7-75
Richland, WA 99352
Phone: 509-376-3361
Email: tiffany.nguyen@rl.doe.gov