

20 Years of Cleanup at Hanford

The U.S. Department of Energy is responsible for the largest nuclear cleanup effort in the world, managing the legacy of five decades of nuclear weapons production. At its peak, this national weapons complex consisted of 16 major facilities, including vast reservations of land in the States of Idaho, Nevada, South Carolina, Tennessee, and Washington.

Nowhere in the DOE Complex is cleanup more challenging than at the Hanford Site in southeastern Washington. Hanford made more than 20 million pieces of uranium metal fuel for nine nuclear reactors along the Columbia River. Five huge plants in the center of the Hanford Site processed 110,000 tons of fuel from the reactors, discharging an estimated 450 billion gallons of contaminated liquids to soil disposal sites and 53 million gallons of radioactive waste to 177 large underground tanks. Plutonium production ended in the late 1980s.

Hanford cleanup began in 1989, when a landmark agreement was reached between DOE, the U.S. Environmental Protection Agency, and Washington State. Known as the Tri-Party Agreement, the accord established hundreds of milestones for bringing the Hanford site into compliance with federal and state environmental regulations.

After 20 years of cleanup, considerable progress has been made at Hanford, reducing the risk the site poses to the health and safety of workers, the public, and the environment.

Hanford Site Cleanup	
Before Cleanup Began (1989)	Examples of Cleanup Work Completed (2009)
53 million gallons of waste in 177 underground tanks, 67 of which have leaked in the past	<ul style="list-style-type: none"> All pumpable liquids removed Tanks integrity assessment under way 7 tanks emptied, 4 more under way
2,300 tons of spent nuclear fuel deteriorating in leak-prone, water-filled basins near the river	<ul style="list-style-type: none"> Moved all spent fuel to dry storage, removing 95 percent of the radioactivity along the river
20 tons of leftover plutonium materials in various forms at the Plutonium Finishing Plant	<ul style="list-style-type: none"> All material stabilized, packaged and being shipped out of Washington State (to be completed in 2009)
80 square miles of contaminated groundwater	<ul style="list-style-type: none"> Active treatment in place along the Columbia River and on the Central Plateau (center of the site), 3.6 billion gallons treated, new technologies being tested and deployed
No treatment capability for underground tank waste	<ul style="list-style-type: none"> Waste Treatment Plant under construction – 47 percent complete
800 waste sites and 496 facilities near the Columbia River requiring cleanup	<ul style="list-style-type: none"> Cleaned up more than half of the waste sites and demolished one-third of the facilities near the river, 8 million tons of debris removed
70,000 drums worth of plutonium-contaminated waste buried or stored on the site	<ul style="list-style-type: none"> 45,000 drums worth of waste retrieved 432 shipments of waste to the national repository in New Mexico
9 retired nuclear reactors along the river requiring constant surveillance and maintenance	<ul style="list-style-type: none"> 5 reactors in interim safe storage (with all associated facilities demolished) and work on 2 more reactors under way
850 waste sites and 970 facilities on the Central Plateau (center of the site) requiring cleanup	<ul style="list-style-type: none"> Cleaned up 39 waste sites and one-quarter (260) of the facilities on the Central Plateau