



ARP VIII waste exhumation.

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RADIOACTIVE WASTE MANAGEMENT COMPLEX

Since the 1950s, the Department of Energy (DOE) has used the Radioactive Waste Management Complex (RWMC) to manage, store, and dispose of waste contaminated with radioactive and hazardous elements generated in national defense and research programs. The RWMC comprises 177 acres* and includes three main areas: the operations and administration area, the Subsurface Disposal Area, and the Transuranic Storage Area.

More than 160 workers from CH2M-WG Idaho (CWI) support the cleanup work at RWMC. Many are housed in the operations and administration area in addition to several prefabricated structures to support operations.

Major cleanup goals slated for the RWMC include:

- Retrieval of 65,000 cubic meters of above-ground transuranic waste and shipment of the material from the Advanced Mixed Waste Treatment Project (AMWTP) to the Waste Isolation Pilot Plant (WIPP) in New Mexico
- Exhumation of targeted buried waste from the Subsurface Disposal Area (SDA)
- Repackaging of drums containing contaminated sludge for shipment to WIPP.

*Includes the Advanced Mixed Waste Treatment Project

SUBSURFACE DISPOSAL AREA

The Subsurface Disposal Area, a 97-acre landfill located inside the RWMC, has been used for the disposal of low-level, hazardous and transuranic wastes. The SDA contains pits and trenches that have been used to store radioactive and hazardous waste for more than 50 years. Most of the transuranic waste buried in the SDA was generated during nuclear weapons production activities at the Rocky Flats Plant and was packaged in drums and boxes prior to being shipped to Idaho.

Since early 2005, the cleanup contractor has been removing plutonium-contaminated filters, graphite molds, sludges containing solvents and oxidized (depleted) uranium from five pits to protect the environment, especially the Snake River Plain Aquifer. In 2008, DOE, the state of Idaho, and the Environmental Protection Agency signed a Record of Decision (ROD) to package 7,485 cubic meters of targeted waste from a combined area of 5.69 acres within the pit areas. Targeted waste is retrieved, packaged, certified for disposal and shipped out of Idaho.

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The ROD also addressed remaining contamination in the SDA to include continued vacuuming of solvent vapors from the subsurface, grouting some mobile contaminants, capping the entire landfill and managing the site after the cap is constructed (e.g., surveillance, maintenance, monitoring and institutional controls).

The overall buried waste project life-cycle baseline was approximately \$1.3 billion and is expected to continue through 2028, when construction of a moisture-inhibiting surface barrier over the entire SDA is completed.

Seven individual excavation projects have been completed since 2005, most notably Pit 9.

Following the completion of targeted waste exhumation at Pit 9, the Accelerated Retrieval Project-V structure was used as a Resource Conservation and Recovery Act storage and waste repackaging area. More than 7,000 drums containing contaminated sludge were transferred from the Advanced Mixed Waste Treatment Project (AMWTP) to ARP-V to be treated, repackaged, and later shipped to WIPP for permanent disposal. Reusing the ARP-V structure saved taxpayers as much as \$20 million over the cost of constructing a new facility. Beginning in late winter,

additional waste drums will be processed. Additionally, the ARP-VII enclosure is being repurposed to treat boxes of debris from AMWTP. Additional workers were hired to complete this new scope.

Exhumation is taking place in the eighth retrieval enclosure.

TRANSURANIC STORAGE AREA

The 56-acre Transuranic Storage Area in the southern section of the RWMC, referred to as the AMWTP, is dedicated to storage of contact and remote-handled transuranic waste. The waste was received at the INL site after 1970 but was not buried. Instead, it was placed in retrievable storage on asphalt pads and then covered with an earthen berm. The waste, in drums and boxes, is also stored in storage containers. About 620 AMWTP workers are currently preparing transuranic waste to ship to WIPP near Carlsbad, New Mexico, which serves as the nation's permanent deep-geologic repository for transuranic waste.

The above-ground transuranic waste will be removed from the state no later than Dec. 31, 2018 under the Idaho Settlement Agreement.

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An absorbant is used to treat sludge waste prior to repackaging.

