Idaho

An aerial view of the Radioactive Waste Management Complex, which DOE is working to close by the end of this decade.

Idaho

Overview

The INL site, located in southeast Idaho, was established in 1949 as the National Reactor Testing Station. The original mission of the INL site was to develop and test civilian and defense nuclear reactor technologies and manage SNF. Fifty-two reactors – most of them first-of-a-kind – were built, including the Navy's first prototype nuclear propulsion plant. Of the 52 reactors, four remain in operation.

In 1951, the INL site achieved one of the most significant scientific accomplishments of the century – the first use of nuclear fission to produce a usable quantity of electricity at the Experimental Breeder Reactor No. 1 (EBR-1). The EBR-1 is now a Registered National Historic Landmark open to the public.

The Idaho Cleanup Project is responsible for treating, storing and dispositioning a variety of radioactive and hazardous wastes, removing and dispositioning targeted buried waste, removing or deactivating unneeded facilities, and managing – and ultimately removing – SNF and HLW from Idaho.

Cleanup accomplishments include:

- **Completed the processing of contact-handled (CH) transuranic debris waste tied to the Idaho Settlement Agreement at the Advanced Mixed Waste Treatment Project (AMWTP) for eventual off-site disposition.**
- **Completed the retrieval of transuranic waste containers placed in retrievable storage at the Transuranic Storage Area Retrieval Enclosure.**
- **Completed exhumation of targeted, buried TRU waste in 5 acres of a planned 5.69 acres at the Subsurface Disposal Area.**
- **Completed the transfers of all EM-owned SNF at the Idaho Nuclear Technology and Engineering Center (INTEC) from wet to dry storage facilities.**
- **Completed treatment of all Idaho Settlement Agreement remote-handled (RH) transuranic waste.**
- **Completed decontamination, decommissioning, and demolition (D&D) of 225 nuclear, radiological, and industrial facilities.**

Long-term work will include emptying and closing the INTEC liquid waste tank farm; the safe storage of any remaining legacy SNF not acceptable for the Office of Nuclear Energy's missions; dispositioning calcine waste; decontaminating and decommissioning remaining excess facilities; and completing the Comprehensive Environmental Response, Compensation and Liability Act cleanup requirements, including Test Area North groundwater remediation and the capping of the SDA. Long term work also includes operating and maintaining the facilities and infrastructure necessary to safely complete the EM mission.

Cleanup Highlights 2020-2030

Over the coming decade, cleanup activities at Idaho will largely focus on completing treatment of remaining liquid sodium-bearing waste, buried waste exhumation, shipment of remaining transuranic waste and decommissioning and closure of facilities at the Radioactive Waste Management Complex (RWMC).

RADIOACTIVE WASTE MANAGEMENT COMPLEX FACILITY OPERATIONS/RWMC CLOSURE

By the end of 2022, DOE will complete several actions at the SDA, including targeted buried waste exhumation, closure of RH LLW disposal vaults and D&D activities. By the end of 2028, DOE is targeting completing the off-site shipments of legacy CH and RH TRU waste. TRU waste shipments are dependent on operations and the availability of WIPP.

IDAHO NUCLEAR TECHNOLOGY AND ENGINEERING CENTER FACILITY OPERATIONS

At INTEC, DOE will complete several actions related to stored SNF. By the end of 2023, DOE will retrieve and move the Peach Bottom Fuel from the older Generation I storage vaults to the more robust Generation II storage vaults at the INTEC Outdoor Fuel Storage Facility (CPP-749). By the end of 2023, DOE will complete the transfer of the balance of non-EM-owned SNF from wet to dry storage and will maintain the fuel in a safe configuration.

Over the next decade, DOE will complete the treatment of the remaining liquid sodium-bearing waste stored at the INTEC Tank Farm. DOE expects to begin radioactive waste treatment operations at IWTU by the end of 2020 and is targeting completion of treatment by the end of 2028. To continue moving the Calcine Disposition Project forward, DOE will continue to develop and test retrieval methods and equipment at the full-scale mockup of the calcine retrieval system.

The Integrated Waste Treatment Unit will turn about 900,000 gallons of liquid radioactive waste into a granular solid.

Remaining Cleanup Scope Post-2030

At the RWMC, remaining work would focus on completing the construction of a planned cap over the SDA (Subsurface Disposal Area) and Resource Conservation and Recovery Act (RCRA) closure and D&D (Decontamination and Decommissioning) of any AMWTP-related facilities along with long-term surveillance-and-maintenance (S&M). S&M activities would continue at least through 2035 for the U.S. Nuclear Regulatory Commission-licensed SNF storage sites (at Ft. St. Vrain in Colorado and the Three Mile Island-2 storage facility at INTEC). Treatment activities would continue for remote-handled mixed low-level and low-level waste. Long-term S&M activities would also continue at INTEC.

Idaho Cleanup Project workers celebrate the last shipment of spent naval fuel from underwater to dry storage.

Transuranic waste leaving Idaho for the Waste Isolation Pilot Plant.