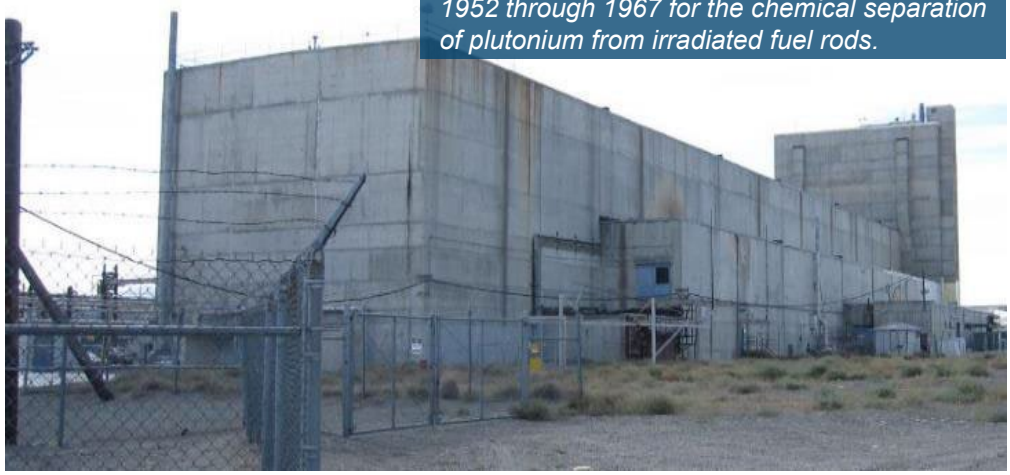
THE HANFORD SITE

Reduction Oxidation Plant

Fact Sheet – January 2024



The Reduction Oxidation Plant operated from 1952 through 1967 for the chemical separation of plutonium from irradiated fuel rods.

The U.S. Department of Energy and contractor Central Plateau Cleanup Company are working to reduce the risks of aging facilities, such as the Reduction Oxidation Plant (REDOX), across the Hanford Site.

Background

The REDOX was the fourth of five processing facilities on the Hanford Site. The REDOX was used from 1952 through 1967 for the chemical separation of plutonium and uranium from irradiated fuel rods. The facility is 470 feet long and 160 feet wide.

The facility processed approximately 24,000 tons of uranium fuel rods during operations. It had the capacity to process up to 12 tons of uranium each day, compared to about 1.5 tons for Hanford's B Plant and T Plant. The REDOX used a solvent extraction process, which was more efficient at extracting plutonium than previous processes. Operations at REDOX also consolidated plutonium processing, which previously required multiple facilities and processes, into one building.

Future

In December 2023 workers completed a major upgrade to the facility's ventilation system to support future cleanup activities. Workers continue surveillance and maintenance activities to keep the facility in a safe condition and ensure compliance with environmental regulations. Workers are also removing radiological and chemical hazards from the plant to prepare the facility for demolition, including asbestos, process equipment and piping, and ancillary structures such as chemical tanks.

Removal of the Plutonium Recovery Cage is a key risk-reduction activity at the Reduction Oxidation Plant.

A new ventilation system supports future cleanup activities inside the facility.

Workers are preparing to demolish tanks that supplied chemicals during fuel processing.