

Hot Cell Removal – Demolition of Highly Contaminated 327 Building

Background

The 327 Building began operations in 1953. Its job during the Cold War involved testing irradiated materials, particularly fuel elements and fuel cladding in nuclear facilities. Located just 1.5 miles north of the City of Richland, the research and fabrication facilities in Hanford's 300 Area resulted in highly contaminated facilities and waste sites that Washington Closure Hanford is cleaning up for the U.S. Department of Energy.



Workers use diamond wire saws to cut hot cells free from the cement floor.



Workers prepare an opening in the exterior wall where the hot cells were rolled out with a gantry system.

The 327 Building was the first nuclear facility to be down-graded by Washington Closure to a controlled, safer facility. During operations, numerous spills created highly contaminated areas in the building.



Extremely hazardous experiments were conducted in remotely operated hot cells.



A gantry system was constructed for removal of the hot cells.



Custom boxes are built around the hot cells before being shipped for disposal at Hanford's Environmental Restoration Disposal Facility.



Supports are installed under the floor where hot cells were rolled out with a gantry crane.



Workers apply a fixative to a nuclear fuel storage basin inside 327. Fixatives were utilized extensively throughout the entire building to control the spread of hazardous PCBs, asbestos, beryllium and high levels of radiological contamination.



The Brokk was used to remotely cut loose contaminated pipes and equipment so the 10 hot cells had clearance for removal from the building.