

October 2010

Environmental Restoration Disposal Facility Safe disposal of highly contaminated hot cells from 327 Building

Background

The Environmental Restoration Disposal Facility (ERDF) is an engineered landfill in the center of the 586-square-mile Hanford Site. ERDF was built in 1996 to accept low-level radioactive and hazardous waste generated during Hanford cleanup activities, primarily from work near the Columbia River. Washington Closure Hanford manages ERDF for the U.S. Department of Energy. The disposal facility is regulated by the U.S. Environmental Protection Agency.



Hanford's Environmental Restoration Disposal Facility



In August 2010, ERDF began receiving 10 highly contaminated hot cells from the 327 Building, which was located in Hanford's 300 Area near the city of Richland and the Columbia River. The 327 Building was used for testing irradiated materials, particularly fuel elements and fuel cladding in nuclear facilities. The ERDF team made extensive preparations before the hot cells were safely disposed.



Extremely hazardous experiments were conducted in the remotely operated hot cells.



The hot cells were removed so Washington Closure Hanford could demolish the 327 Building. A gantry crane system was erected at the 327 Building to remove the hot cells.



Each of the hot cells was grouted inside the custom steel box.



The hot cells weighed between 150,000 and 460,000 pounds.



A second gantry crane system spanning 90 feet was erected at ERDF to offload the hot cells.



The hot cells were transported one at a time from the 327 Building to ERDF on a heavy duty flat-bed truck. The first hot cell was delivered to ERDF on August 7. The 10th hot cell was delivered September 29.



The ERDF team used flood grouting techniques to fill the void space underneath and between the hot cells.