

EXCESS CONTAMINATED FACILITIES AT Y-12 AND OAK RIDGE NATIONAL LAB



FACT: The Oak Ridge Office of Environmental Management (OREM) is working to reduce risks within the Y-12 National Security Complex and Oak Ridge National Laboratory by better understanding conditions, removing hazards, and stabilizing buildings with deteriorating conditions that increase the chance for exposure and the spread of contamination.

CHALLENGE: Oak Ridge has more than 200 excess contaminated facilities and contains the Department of Energy's largest inventory of high-risk facilities. Many of them have deteriorated to the point where they pose potential risks to the environment and employees working at the Y-12 National Security Complex and Oak Ridge National Laboratory. Delays in addressing these facilities increases risks and costs for future cleanup.

SOLUTION: Congress has provided funding to begin addressing some of these facilities. OREM has worked with the National Nuclear Security Administration and the Office of Science to develop an integrated approach that addresses the most immediate needs in and around the high-risk facilities. These projects will improve worker safety and reduce the costs and complexity of future cleanup by removing threats and helping prevent further migration of contaminants.

The following projects are current priorities for OREM, and more are planned if funding continues for the Excess Contaminated Facilities initiative.

RISK REDUCTION ACTIVITIES

SITE: Y-12 NATIONAL SECURITY COMPLEX

ACTIVITY: ALPHA 4 COLEX EQUIPMENT

Alpha 4 housed equipment in the 1950s and 1960s that used large amounts of mercury for their operations. The decades old equipment was rusted, deteriorating, and exposed to the elements. Before being dismantled, crews retrieved more than 10,000 pounds of mercury—preventing a large environmental release. OREM eliminated the equipment on the west end of the building, and it is addressing equipment on the east end of the building while testing mercury remediation technologies that will enhance future cleanup at Y-12. Removing this equipment also moves OREM closer to taking down the massive building.



SITE: Y-12 NATIONAL SECURITY COMPLEX

ACTIVITY: BIOLOGY COMPLEX

OREM demolished two high-risk buildings in 2018, and it is preparing the remaining five high-risk buildings in the Biology Complex for demolition beginning in 2020. The project is scheduled for completion in 2021. The removal of these facilities will eliminate significant structural hazards at the site, and it will clear land for Y-12's new Lithium Processing Facility.



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RISK REDUCTION ACTIVITIES cont'd



SITE: OAK RIDGE NATIONAL LABORATORY

ACTIVITY: BUILDING 3026

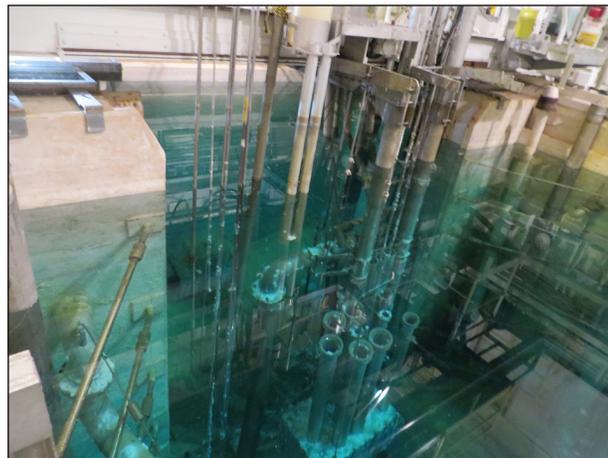
Building 3026, the Radioisotope Development Lab, has been demolished along with four of its six hot cells. Now, only two hot cells remain. OREM is installing a protective tent to cover the area for demolition, and workers will begin tearing down these hot cells in spring 2020. Their removal eliminates a significant risk from the heart of ORNL while opening land for future missions.



SITE: OAK RIDGE NATIONAL LABORATORY

ACTIVITY: BUILDING 7500

A leaky roof is causing structural problems for Building 7500. The building's lack of structural integrity makes it unsound to perform inspections and repairs on the facility. The leaking was further degrading asbestos material contained within the facility and increases the cost of decontamination and demolition. OREM has removed all of the combustible material and asbestos to stabilize the building as it awaits demolition.



SITE: OAK RIDGE NATIONAL LABORATORY

ACTIVITY: BUILDING 3010

Building 3010, the Bulk Shielding Reactor, is one of 13 former research reactors at ORNL. Workers have successfully isolated all utilities and completed activities to ensure the structure is safely configured for demolition. Employees designed underwater tools to collect characterization samples in the 27-foot-deep reactor pool, and they obtained the samples needed. Now, crews are preparing to remove the irradiated items from the reactor pool, and they are working to remove all the asbestos from the building.



SITE: OAK RIDGE NATIONAL LABORATORY

ACTIVITY: BUILDINGS 3028 AND 3029

Located on Isotope Row, Buildings 3028 and 3029 contained highly contaminated hot cells that were used for isotope production from 1950-1985. OREM completed a process that encapsulates the contamination in the facilities' hot cells, reducing the potential for its migration as the buildings await demolition.



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