

OAK RIDGE

“Our skilled, experienced workforce is advancing the new chapter of cleanup at the Y-12 National Security Complex and Oak Ridge National Laboratory in a big way. Our continued progress across the Oak Ridge Reservation is transforming the landscape and benefiting the community by enhancing safety, creating new economic opportunities, and clearing land for expanding research and national security missions.”

– Laura Wilkerson, Acting Manager, Oak Ridge Office of Environmental Management

HIGHLIGHTS

- Completed demolition on the Biology Complex – an EM 2021 priority.
- Demolished the Radiological Development Lab’s West Cell Bank.
- Demolished the Tritium Target Preparation Facility.
- Oak Ridge Reservation cleanup contract awarded – an EM 2021 priority.
- Transferred ETPP real property to other DOE programs/community organizations.
- Conducted deactivation activities at 23 buildings to address DOE’s largest inventory of high-risk facilities.
- Processed and disposed the low-dose portion of Oak Ridge’s uranium-233 inventory and provided medical isotopes for next-generation cancer research.
- Advanced construction on the Mercury Treatment Facility.
- Restored the former Centrifuge Complex and Powerhouse areas for transfer and future use.
- Completed 100th shipment of TRU waste to WIPP since waste disposal resumed in 2017.

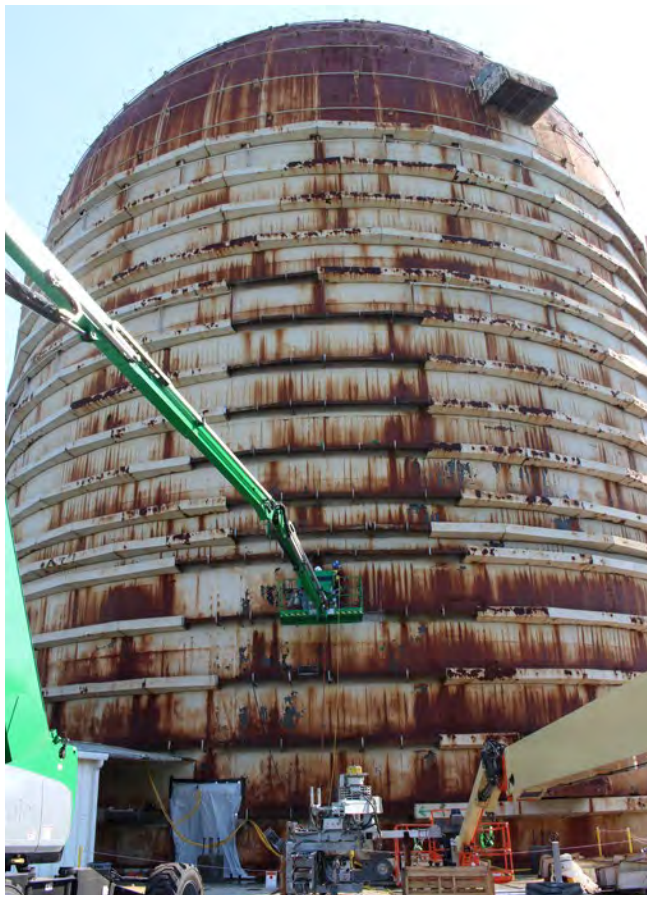
CLEARING AWAY THE OLD AND MAKING WAY FOR THE NEW

With all demolition complete at the ETPP, the Oak Ridge Office of Environmental Management (OREM) transitioned its skilled, experienced workforce responsible for that historic accomplishment to begin a new chapter of cleanup at ORNL and Y-12. Those crews are now in various stages of deactivation and demolition preparation inside 23 facilities at those sites, including former research reactors, uranium processing facilities, isotope and fission development laboratories, and support buildings. ORNL and Y-12 house hundreds of excess contaminated facilities that comprise the largest inventory of high-risk buildings in the DOE complex. Collectively, these efforts are reducing risks, stabilizing facilities, and paving the way for large-scale demolition that will enhance safety, advance cleanup and provide land for research and national security missions.



Crews take down the six-story Building 9207 at the former Biology Complex at Y-12. The 1940s-era building spanned 255,000 square feet and was listed as a high-risk facility.

OREM completed a 2021 EM priority by finishing demolition of the former Biology Complex, located at Y-12. This involved tearing down the massive six-story, 255,000 square-foot Building 9207 and the three-story, 65,000-square-foot Building 9210. These were the final two structures remaining from the original 11-building complex that dated back to the 1940s. The project shortened the list of high-risk facilities in Oak Ridge, and it cleared an 18-acre area that is the planned location for the future Lithium Processing Facility that will support national security missions at the site.



Crews prepare the Experimental Gas-Cooled Reactor for deactivation. The eight-story facility at ORNL stands 216 feet tall.

Crews also demolished the former Radiological Development Lab’s West Cell Bank at ORNL. Crews eliminated this high-risk contaminated structure and opened space in the heart of ORNL for future research missions.



Crews remove the former Radiological Development Lab’s West Cell Bank at ORNL. Crews built a protective cover over the structure to ensure a safe teardown of the high-risk contaminated structure.

REMOVING OAK RIDGE’S INVENTORY OF NUCLEAR WASTE

This year, workers completed processing the remaining low-dose inventory of uranium-233 stored at ORNL and shipped the material for safe, permanent disposal off site. Part of this process involved extracting medical isotopes being used for next-generation cancer treatment research. Employees also finished upgrades in Building 2026 for processing to begin on the high-dose portion of the remaining uranium-233 inventory.



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Oak Ridge also hit a milestone related to disposing its inventory of TRU waste in 2021. Since shipments resumed to WIPP in 2017, more than 100 shipments have been completed from Oak Ridge. This accounts for more than 3,300 drums of legacy contact-handled TRU waste, representing a 50 percent reduction in the Transuranic Waste Processing Center’s inventory.

INVESTING IN INFRASTRUCTURE TO MAINTAIN PROGRESS

The Outfall 200 Mercury Treatment Facility is the linchpin for EM’s cleanup strategy at Y-12. This vital piece of infrastructure will open the door for large-scale demolition at Y-12 by providing a mechanism to safeguard against potential mercury releases into the Upper East Fork Poplar Creek. Teams advanced construction on the treatment plant and headworks facilities. When operational in 2025, the facility will treat up to 3,000 gallons of water per minute, helping meet regulatory limits in compliance with EPA and State of Tennessee requirements.



View of construction progressing at the Mercury Treatment Facility. When operational in 2025, it will be able to treat up to 3,000 gallons per minute.

OREM is also investing \$27 million to upgrade and extend the life of an aging waste treatment system that is critical to ongoing missions at ORNL. The Liquid and Gaseous Waste Operations system is comprised of more than 60 facilities and 27 miles of piping that treats waste streams from cleanup operations, R&D labs, radiochemical pilot plants and nuclear reactors. As part of that investment, OREM completed construction of a new treatment system that consolidates multiple capabilities into a single facility, and workers are replacing more than a mile of deteriorated piping to ensure the system’s reliability.

ADVANCING SOIL CLEANUP AT THE EAST TENNESSEE TECHNOLOGY PARK

With all the buildings demolished at ETPP, crews were actively removing slabs and remaining contaminated soil areas this year to achieve OREM’s ultimate vision for the site as a multi-use industrial center, national park and conservation area. Workers completed several major projects, including removing the largest slab at the site from the former Centrifuge Complex. The five-acre footprint was excavated and backfilled with nearly 5,500 truckloads of soil to support the area’s transfer and reuse.

Crews also transformed the former Powerhouse Area – once home to a massive power plant and oil tanks – into a clean, grassy field primed for future recreational use. OREM backfilled and contoured a 21-acre section of the area previously used as a scrapyard. The project directs stormwater to wetlands and the nearby Clinch River. Transforming and recontouring the site, which is proposed for recreational development, required more than 6,000 truckloads of backfill and 2,000 truckloads of topsoil.



Heavy equipment tears up the largest remaining slab at ETPP, which was where the former Centrifuge Complex once stood.