



FY 2024 Cleanup Progress

Annual Report on Oak Ridge Reservation Cleanup



Message from the Manager

DOE Oak Ridge Office of Environmental Management



To the Oak Ridge Regional Community:

We're proud to share this year's Cleanup Progress Report. It is full of stories that show the success and progress of our employees, contractors, labor workforce, and other partners in 2024. The Oak Ridge Office of Environmental Management (OREM) completed all of our annual priorities ahead of schedule, and those projects translated into meaningful and visible transformation at all three sites in Oak Ridge.

Crews finished soil remediation and entered the final phase of cleanup at the East Tennessee Technology Park (ETTP) this year. That effort involved excavating and disposing of nearly 50,000 dump truck loads of soil. Completing that work eliminates risks and allows OREM to transfer the remaining federally owned parcels at ETTP to the community to attract new businesses and economic development.

Regulators also signed two Records of Decision that provide the guidance and approval necessary to address groundwater in the main plant area and the K-31/K-33 area at ETTP. Those decisions, along with two others under development, will be implemented to guide remediation to complete our cleanup mission at that site.

Teams were also busy preparing more than a dozen excess contaminated facilities for demolition at Oak Ridge National Laboratory (ORNL). They shipped the Low Intensity Test Reactor vessel and removed and shipped the reactor vessel from the Oak Ridge Research Reactor for disposal. Workers are steadily cleaning out former reactor facilities and isotope labs to enable their near-term tear down. These projects will drastically alter the skyline in the heart of ORNL and open space for research missions.

The campaign to process and dispose of the inventory of uranium-233 stored at ORNL is also moving forward significantly. Employees have processed more than 125 canisters of high dose material to date. As part of an



innovative public-private partnership, the project is also extracting medical isotopes that are supporting next-generation cancer treatment research. The company receiving the isotopes announced it is now producing at a commercial scale to supply clinical trials across the globe.

Another partnership with private industry enabled us to transfer one of the largest single sources of legacy radioactive material from storage at ORNL. That material will be recycled into a source of clean energy for new power systems employed by other federal agencies.

At the Y-12 National Security Complex (Y-12), teams began demolition on the Alpha-2 Complex. That ushers in a new chapter of cleanup and signifies the first demolition on a former Manhattan Project-era uranium enrichment facility at Y-12. The project removes risks associated with the aging, contaminated structure, and it opens space to support national security missions in the years ahead.

Employees also advanced work on the important Environmental Management Disposal Facility (EMDF) project. When complete, it will provide OREM the waste disposal capacity needed to complete cleanup at Y-12 and ORNL. In 2024, employees completed EMDF's early site preparation five months ahead of schedule and more than \$13 million under budget. Crews also started fieldwork on the second phase of the project that will help provide the information necessary to finalize the facility's design.

Finally, I'm proud to announce that OREM signed a \$42 million agreement as part of the Natural Resources Damage Assessment process for impacts from the U.S. Department of Energy's historic operations on the Oak Ridge Reservation. The agreement aims to restore natural resources or replace natural resource services equivalent to what was lost. The funds from the agreement will support grants for a wide range of local projects that enhance the area's natural resources and provide nature and recreational opportunities.

We are incredibly grateful for the support and involvement we enjoy from the Oak Ridge community. We are committed to keeping our local partners and stakeholders informed about the work ahead. Thank you for your role in helping advance cleanup, and we look forward to kicking off another productive year.

Jay Mullis



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This report was produced by UCOR, DOE’s Environmental Management contractor for the Oak Ridge Reservation.

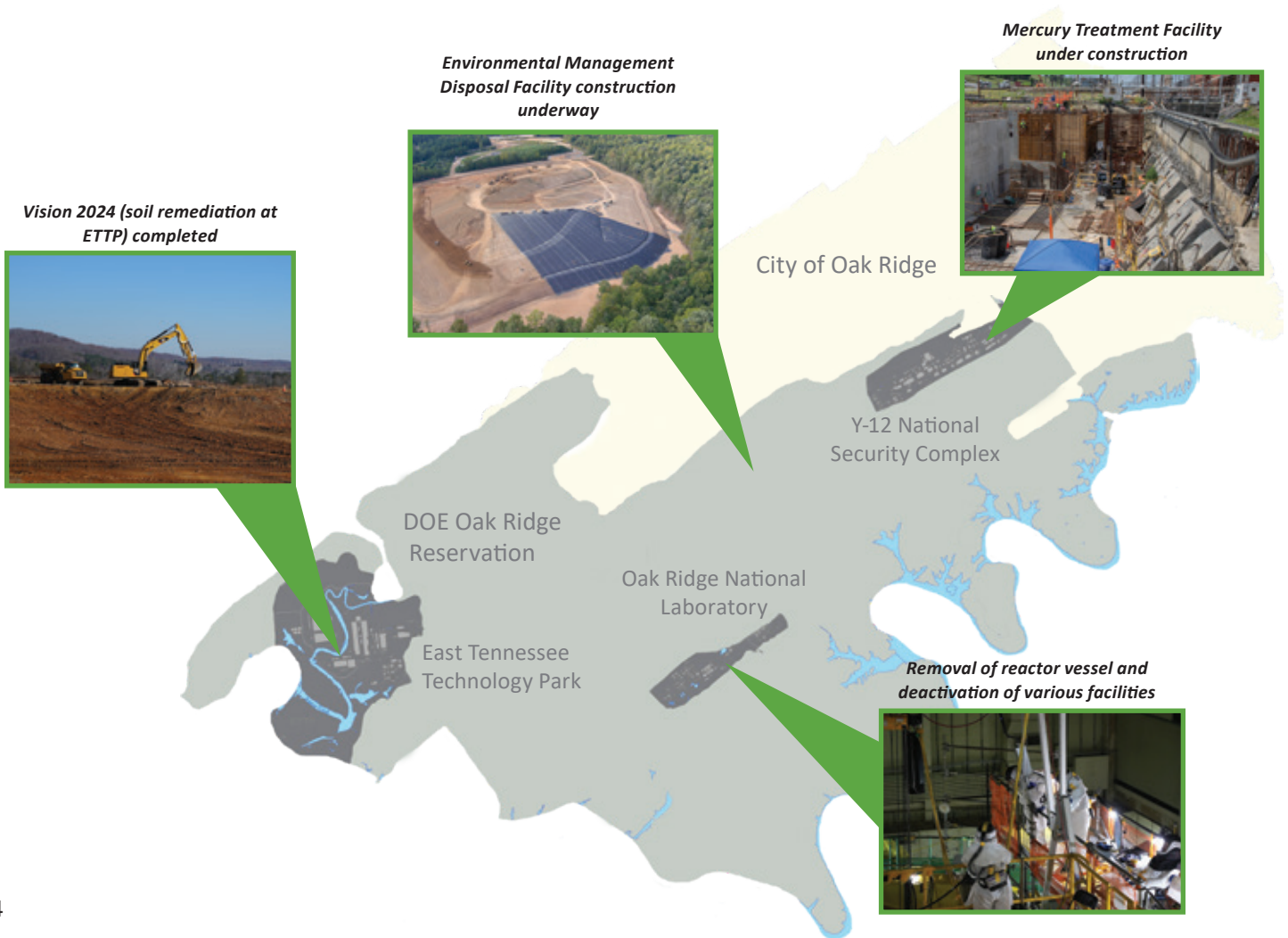
Introduction

In Fiscal Year (FY) 2024, workers made significant progress on cleanup projects across the Oak Ridge Reservation. At the East Tennessee Technology Park (ETTP), cleanup contractor UCOR completed soil remediation activities, and the first two groundwater Records of Decision on the Oak Ridge Reservation were approved to support the site's transformation to a multi-use industrial center, national park, and recreational area.

Cleanup at Oak Ridge National Laboratory (ORNL) advanced significantly with disposal of a second reactor from the site, removal of contaminated components from the Oak Ridge Research Reactor pool, and continuing efforts to remove unneeded facilities to free up valuable space for continuing research missions. At the Y-12 National Security Complex, workers were performing deactivation of several facilities, preparing them for eventual demolition, and progress continued on construction of the Outfall 200 Mercury Treatment Facility.

The Oak Ridge Reservation has played key roles in our nation's defense and energy research. However, past operations during the Manhattan Project and Cold War eras created legacies that require environmental cleanup and placed areas of the reservation on the U.S. Environmental Protection Agency's (EPA) National Priorities List, which includes sites nationwide that require cleanup under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). These areas on the Oak Ridge Reservation have been defined, and OREM is working to clean and restore them under a partnership with the EPA and the Tennessee Department of Environment and Conservation (TDEC).

Through the support provided by contractors, labor, Congress, and state and local officials, the DOE Oak Ridge Office of Environmental Management (OREM) is enhancing safety, removing barriers to economic development, and enabling vital missions in science, energy, and national security.





Oak Ridge National Laboratory

The Oak Ridge National Laboratory is DOE's largest multi-program national laboratory that conducts cutting-edge research in energy, materials and chemical sciences, nuclear science, and supercomputing. However, the site also houses numerous old, contaminated buildings and forms of waste from previous research and operations in past decades.

Lower reactor vessel removed from 3042 reactor

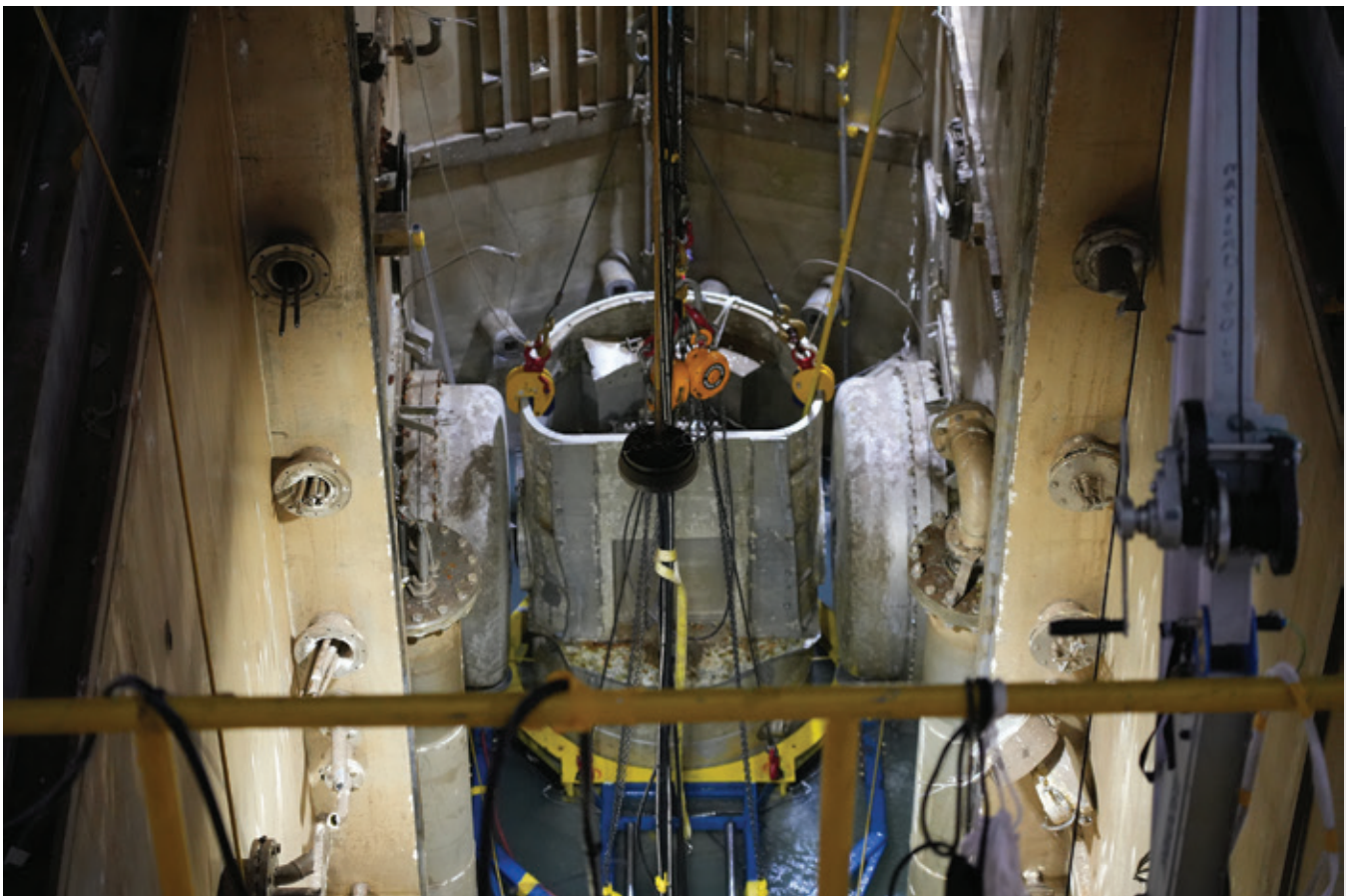
Crews successfully lifted and removed the lower reactor vessel from the Oak Ridge Research Reactor (Building 3042). Last year, workers removed the top third portion of the reactor and since then, they drained and filtered the reactor pool so that they could reach irradiated materials and prepare for the lower reactor vessel removal.

Cleanup contractor UCOR put extreme safety measures in place as high radiation dose rates were present and increased as thousands of gallons of pool water were pumped into tanks outside the facility, lowering the buffer between the radioactive materials and workers. With the wastewater safely drained, workers performed sampling and characterizing to ensure the work areas remained safe for final segmentation and removal of components.

Initially, clarity in the pool was very low due to the presence of fluorescein dye, making retrieving

radioactive waste and reaching the lower reactor vessel for removal extremely difficult. To help with pool navigation, workers used an ultraviolet water robot light source to locate underwater materials. A consistent filtering routine using long-reach vacuums and slowly lowering the water a few feet at a time to prevent the sediment from the bottom of the pool mixing into the water proved to be productive.

UCOR segmented and removed the remaining reactor vessel after removing 19,000 gallons of reactor pool water. The reactor vessel sections weighed in at 5,100 pounds for the lower portion and 6,900 pounds for the upper piece. In addition, workers safely removed and packaged for disposal more than 100,000 pounds of hazardous lead waste from legacy tanks and process systems. Removing the lower portion of the reactor vessel and draining the reactor pool water allows the facility to be fully deactivated and then eventually demolished.



A saw cuts the lower reactor vessel loose from its housing



Reactor pool after water drained and lower reactor vessel removed



Reactor vessel being transferred to a truck for offsite disposition

3005 reactor vessel shipped offsite for disposition

Workers shipped the 35,600-pound, 30-foot-long reactor vessel from the now-demolished ORNL Low Intensity Test Reactor (Building 3005) offsite for disposition. Once workers removed the vessel and placed it in a temporary storage container, engineers measured contaminant levels and determined that the reactor was not considered transuranic waste.

The team developed a new process for packaging, hoisting, rigging, shipping, and disposing of the vessel. Workers removed the reactor vessel from its temporary storage container, safely placed it into a custom-designed casing and trailer, and subsequently loaded it for transport offsite. Workers have completed all deactivation and demolition activities at the Low Intensity Test Reactor.



Reactor vessel loaded onto truck



Oak Ridge Graphite Reactor and its support facilities

Prep continues for OGR support facilities demolition

Workers are preparing three Oak Ridge Graphite Reactor (OGR) ancillary facilities located at ORNL for eventual demolition. They are deactivating the Filter House (Building 3002), Fan House (Building 3003), and Exhaust Stack (Building 3018).

During the fiscal year, workers completely deactivated the Building 3003 Fan House and were continuing to deactivate the 3002 Filter House at the end of the

fiscal year. Crews have completed decontamination of the filter cells and were preparing to apply fixative to prevent contamination spread during demolition. Crews are working to isolate the Filter House from the main Building 3001 where the OGR is located, a requirement prior to initiating support facility demolition next year. After performing mock-ups, crews are working to remove water and sludge in an internal building canal.



Workers perform deactivation activities in the Oak Ridge Graphite Reactor support facilities

Workers prepare to remove final hot cell from former Radioisotope Development Laboratory

Work continued in FY 2024 to remove the final hot cell from the former Radioisotope Development Laboratory (Building 3026) footprint.

Crews demolished the outer structure and several hot cells in previous years. The hot cells were structures heavily encased in concrete to provide researchers protection from highly radioactive material during the years the facility was operational.

Workers successfully addressed challenges to removing water and sediment from the cell bank floor

by suspending sediment in water and then filtering it through prepacked filters, capturing the filtrate in waste tote containers for disposal. Crews then prepared and placed 24 inches of a concrete mixture into the hot cell to reduce the overall radiation dose rates by more than ten times the initial readings.

After creating access into the cell, workers installed contamination fixing agents and additional radiation shielding so they could safely continue deactivation and packaging of remaining waste. The structure is scheduled to be demolished in 2025.



Workers prepare to pour concrete mixture into the hot cell, which is inside the tent structure



Workers remove krypton tanks from a storage area at Isotope Row

Deactivation underway at Isotope Row facilities

Deactivation is underway at ORNL's 12 Isotope Row facilities. These activities include sampling and removing contaminated materials and hazardous waste such as transite duct, laboratory hoods, glove boxes, ventilation exhaust pipes, process drains, and lead. Significant achievements included the first shipment of transuranic waste from the Isotope Development Laboratory (Building 3038), disposal of contaminated equipment, and complete removal of four storage tanks from the 3093 Storage Cubicle. These 2,000-pound, 9-foot-long tanks stored krypton, which was used in thermal diffusion operations. In the Radioisotope Production Laboratory (Building 3029), workers were performing hot cell cleanup and equipment removal.



The first transuranic waste shipment leaves Building 3038

Repairs to 250-ft-tall 3039 stack completed

Workers completed repairs to the ORNL Gaseous Waste System's 3039 Stack. They repaired duct breechings that had occurred over the years as the system aged and shifted. They also completed the removal and repair of grout used to hold brickwork in place throughout the stack. Then crews removed the top five feet of the formerly 250-foot stack and installed a new stack cap.

The stack was constructed in 1949, providing ventilation to operations at the site. Physical inspection of the structural integrity of the stack in FY 2023 identified areas of the stack that had notably deteriorated and required repairs.

These repairs will ensure the stack continues to operate for at least 10 more years.



The 3039 stack repairs will extend the operational life of the structure, which was built in 1949



3608 piping replacement project completed

Workers completed the 3608 Above-Ground Piping Replacement Project—an extensive piping project to extend the life of the Liquid and Gaseous Waste Operations (LGWO) system.

This three-year, \$18 million project at the 3608 Process Waste Treatment Complex improves efficiency and reliability, helping to avoid the possibility of disrupting ongoing ORNL operations.

Workers safely disposed of 115,000 pounds of waste, installed approximately 5,500 feet of piping, conducted heat tracing, and installed insulation. Completing two miles of welded line took approximately 5,000 work hours.

Workers completed the major infrastructure upgrade four months ahead of schedule and \$600,000 under budget.



Workers install piping as part of the 3608 piping replacement project

Upgrades to 2600 piping being planned

With the piping and valve replacement for Building 3608 completed, workers have begun the engineering instructions, fabrication, and replacement of above-grade piping at the 2600 storage area.

The project involves replacing existing old piping with new stainless steel piping and valves. When complete in 2026, the replaced 2600 piping will make the system more efficient and reliable and will help avoid the possibility of disrupting ongoing ORNL operations.

Workers replace 3608 Filter Press

Crews completed another extensive effort in FY 2024 at the Process Waste Treatment Complex. Workers completed replacement of the 3608 Filter Press.

The filter press is used to press liquids out of waste products to prepare them for shipment. It is a critical tool for preparing waste shipments. The old filter press had reached the end of its service life

expectancy. The new press's efficiency has resulted in a decreased weight per box by an average 400 pounds, which enables LGWO operations to reduce time and craft resources needed for box loading.

After completing the successful startup of the new filter press, crews also fully recovered from over a month of filter downtime.

Continuous Purge System installation nearing completion at Molten Salt Reactor Experiment

The Molten Salt Reactor Experiment (MSRE), a test reactor, operated at ORNL from June 1965 until December 1969. Upgrade of the drain tank off-gassing system is required to keep this critical system safe until the facility is demolished. Accordingly, installation and cold testing of the MSRE Continuous Purge System, which will allow continual off-gassing of the salt drain tanks, is nearing completion.

Workers completed project installation in mid-2024. Cold testing has identified nitrogen flow issues, which are being addressed. Readiness Assessments for startup are planned in the winter of 2024-2025.

The MSRE Feasibility Study (FS) is underway to develop remedial alternatives for the MSRE facility. This FS evaluates risk associated with potential future release of contaminants from groundwater to the nearby creek. In FY 2024, the Remedial Investigation Report outlining the completed characterization from nondestructive assay measurements and modeling methodology was submitted to DOE and the regulators. The next deliverable will be the FS in FY 2025.



MSRE Continuous Purge System

Characterization completed at ORNL locations

Crews continued characterization efforts for the soils and subsurface components of the Bethel Valley Interim Record of Decision through FY 2024.

In FY 2024, workers completed characterization on the east side of the ORNL campus, and as part of demolition activities at 3002, 3003, and 3005 within the central campus. They also performed evaluations for determining the need for remedial actions for various areas in the east and central campus. Of these

sites, remedial actions were recommended for two sites. These actions are slated to be completed in FY 2025.

A document detailing the soil sampling plan for 30 acres in the ORNL central campus has been submitted to regulators. This is the first sampling plan for the larger area that contains the highest potential contamination levels on campus.



Isotek exceeds annual U-233 processing goals

OREM and contractor Isotek achieved a 2024 priority for the U.S. Department of Energy Office of Environmental Management (EM). They surpassed EM's 2024 goal of processing 35 canisters of uranium (U)-233 months ahead of schedule. Employees have processed 130 canisters since refurbishing the hot cells inside Building 2026 as part of the U-233 Disposition Project.

The project is focused on eliminating the inventory of U-233 stored in the world's oldest operating nuclear facility, located at ORNL. That material presents risks and is costly to keep safe and secure. Originally created in the 1950s and 1960s for potential use in reactors, U-233 proved to be an unviable fuel source. Half of the U-233 inventory was disposed of between 2011 and 2017; however, the remaining material requires processing to convert it into a form safe for shipment and disposal.

Isotek began processing the lower-dose material in 2019 and higher-dose material in 2022. The current processing campaign for the higher-dose material is 25 percent complete and slated for completion in 2026. Isotek has shipped approximately 350,000 pounds of waste for disposal since processing began in the U-233 Disposition Project.

Additionally, an agreement with TerraPower allows Isotek to extract thorium-229, an extremely rare isotope, from the material before it is processed and disposed of.

Isotek extracts the thorium-229 before it is shipped to TerraPower. The company uses that extracted material to recover actinium-225, a medical isotope critical to

a promising form of next-generation cancer treatment called targeted alpha therapy.

Earlier this year, TerraPower announced it distributed the first samples of actinium-225 to two pharmaceutical companies to support the development of the revolutionary cancer treatment. This fall the company announced it is now producing actinium-225 at a commercial scale, providing sustained access to the global pharmaceutical community through weekly production runs. As a result, this material is now used in multiple drug developers' radiopharmaceuticals in human clinical trials across the globe.

Once all thorium-229 has been extracted over the next four years during the remainder of the U-233 Disposition Project — an estimated 40 grams — 100 times more doses of next-generation cancer treatments will be available annually than are currently available worldwide.

Global demand for actinium-225 is expected to increase as more treatments are developed, making the work performed by OREM and Isotek more vital and impactful.



Waste tank being moved to a shipping cask



Y-12 National Security Complex

The Y-12 National Security Complex is a premier manufacturing facility dedicated to protecting our nation. Y-12 helps ensure a safe and reliable nuclear weapons deterrent. The site also retrieves and stores nuclear materials from around the world, fuels the nation's naval reactors, and performs highly skilled, specialized manufacturing for government agencies and private-sector entities.

Demolition begins on Alpha-2 Complex

Demolition is underway at one of the Manhattan Project-era complexes at Y-12. Crews started demolition of the Alpha-2 Complex late in FY 2024 by tearing down one of the support structures (the carpentry shop).

The main facility in the complex is the massive Fusion Energy Building (Building 9201-2), also referred to as Alpha-2. The Alpha-2 facility occupies nearly two-and-a-half acres of land. At nearly 325,000 total square feet, the Alpha-2 building is one of the largest high-risk facilities at Y-12. More than 60 percent of the facilities throughout the National Nuclear Security Administration (NNSA) complex are more than 40 years old. The 1940s-era Alpha-2 is one of Y-12's high-risk excess contaminated facilities EM is addressing.

At the end of the fiscal year, workers were preparing to start demolition on the main Alpha-2 facility. Once complete, the demolition eliminates a hazard from the site and provides land for reuse at Y-12.

Workers began deactivating the Alpha-2 complex in 2020. This work included removing the last of the hazardous waste and draining oil from equipment. Crews had to clear various areas of the basement to allow it to be filled with controlled low-strength material (concrete mixture). The material will provide structural support for heavy equipment that will be on the slab during demolition. Workers also had to plug storm drainage areas around Alpha-2 as one of the last preparatory steps to demolition.



Demolition of the Alpha-2 Complex begins with removal of the carpentry shop



A worker prepares to lay the foundation for utility rerouting

While deactivation was going on inside Alpha-2, a separate project was underway on the outside to reroute Y-12 utilities around the complex. Although rerouting these utilities is under the scope of Consolidated Nuclear Security (CNS) through NNSA, CNS subcontracted the project to UCOR to ensure that completing critical scheduling milestones on this project did not delay the start of Alpha-2 demolition.

The project involved rerouting several key utilities, including steam, instrument air, plant air, argon gas,

nitrogen gas, and demineralized water. Workers installed four new structural steel bridges for those rerouted utilities across Second Street, which is the main road adjacent to Alpha-2. Each bridge weighs over 2,000 pounds and took over a year to design and build.

Installation of new piping systems for Y-12 requires extensive design support, field engineering, and system testing to meet specific system requirements.

Deactivation continues at former enrichment buildings

Deactivation activities and planning continued at former uranium enrichment facilities throughout FY 2024.

Beta-1 (9204-01)

Beta-1 is a three-story, former uranium enrichment facility covering 210,500 square feet. Workers completed deactivation of the above-ground floors during the fiscal year. Pumping and treating water from the basement has been a significant undertaking. In FY 2024, crews treated 5.7 million gallons and will

continue to mitigate weather-based water intrusion. In addition, 100 linear feet of old thorium-contaminated piping was safely removed and prepped for disposal. Demolition is expected in 2026.

Alpha-4 (9201-4)

Activities moving the 600,000-square-foot Alpha-4 building closer to cold and dark status began with crews installing a 13.8kV electrical skid. Crews addressed mercury vapors, supporting repackaging containers for eventual waste disposition.

Workers have characterized roughly 50% of the facility's waste and shipped 227 legacy waste containers, with another 260 characterized. The next fiscal year will move Alpha-4 closer to achieving declassification, cold and dark status, and the completion of legacy waste disposition.

Beta-4 (9204-4)

As the fiscal year closed, planning was underway that would allow workers to start work in Beta-4. Once all plans are reviewed and approved, crews will begin to move the facility toward the cold and dark state.



Beta-1



Alpha-4



Beta-4

Progress continues at Mercury Treatment Facility

Progress continued on construction of the Outfall 200 Mercury Treatment Facility. The facility is the linchpin for OREM's cleanup strategy at Y-12. This vital piece of infrastructure will open the door for demolition of Y-12's large, deteriorated, mercury-contaminated facilities and subsequent soil remediation by providing

a mechanism to limit potential mercury releases into the Upper East Fork Poplar Creek.

In FY 2024, UCOR assumed construction responsibility for the Mercury Treatment Facility and began moving forward on the construction of the Treatment Plant and Headworks Facility.



Construction activities at the Mercury Treatment Facility

At the Headworks site, workers are building concrete structures for handling normal flows and higher storm flows. They made progress throughout the year on these structures with approximately 600 cubic yards of concrete poured to bring the project total to 2,400 yards of concrete.

At the treatment site, workers completed the construction of a gravity filter and installed additional tanks. The completion of the gravity filter allows workers in the coming year to complete the structural steel and roofing of the eventual operations building.

Plans are being finalized for the next phases of construction.

When operational, the facility will be able to treat 3,000 gallons of water per minute and help DOE meet regulatory limits in compliance with EPA and state of Tennessee requirements.



Tank installation at the Mercury Treatment Facility

Soil remediation efforts being planned

Soil remediation is essential to ensuring environmental safety and allowing reuse of currently contaminated land. Several remediation efforts are underway in the Upper East Fork Poplar Creek and Bear Creek areas.

Y-12 National Security Complex

OREM and UCOR meet regularly with the NNSA Y-12 Field Office and its contractor to share information and develop a plan for efficiently addressing legacy soil contamination in the Y-12 main plant area, otherwise known as the Upper East Fork Poplar Creek area.

The group is focused on understanding the probability and type of contamination in the soil at specific areas of the plant due to historical operations and processes. This includes footprints that will become accessible once buildings are demolished. Additionally, employees evaluate potential challenges associated with performing soil sampling and soil excavation work on an active site. Next year's completed strategy will result in a valuable communication and partnering tool for site planning, estimating budgets, determining

resource needs, and early identification of major hurdles.

White Wing Scrap Yard

Planning is underway to transfer the Self Sufficiency Parcel 2 (SSP 2) in the north central portion of the Oak Ridge Reservation. The former White Wing Scrapyard (WWSY) occupies part of SSP 2. The group held a data quality objectives session with EPA and TDEC to develop a site characterization plan for WWSY. In addition, a Remedial Investigation Work Plan (RIWP) was prepared and submitted to EPA and TDEC for review. Due to DOE's intent to accelerate SSP 2 transfer, initial surface soil sampling was completed within the WWSY footprint. This sampling provided initial site characterization data to inform follow-on sampling and support early remedial action planning within the WWSY study area.

Bear Creek Burial Ground

The Bear Creek Burial Ground (BCBG) is a former disposal area that received a wide variety of industrial

wastes for roughly 38 years (1955 to 1993), primarily from Y-12 operations. These wastes contained large amounts of uranium as well as chemical solvents, oils, and PCBs. OREM completed actions in 1994 to close disposal units and isolate waste remaining in place. To reduce contamination discharges to nearby streams, crews have installed engineered caps and soil covers over waste disposal units, as well as leachate collection systems. Numerous studies performed at BCBG have shown that the site continues to contribute contaminants, including uranium and organic

solvents, to surface water and groundwater. OREM and UCOR will conduct a comprehensive Remedial Investigation (RI) to characterize current conditions, assess risk to human health and the environment, and develop and evaluate alternatives to remediate the contaminant sources working toward a final remedy. OREM and UCOR completed a preliminary field investigation in FY 2024 on current contaminant levels in BCBG tributaries and groundwater. Results of that investigation support the RI Work Plan that OREM and UCOR began developing in FY 2024. The BCBG RI will further characterize soil, surface water and sediment in streams, and groundwater throughout the BCBG.

North Tributary-8

In September 2024, OREM and UCOR submitted an Action Memorandum (AM) for regulatory review for North Tributary (NT)-8 at the Y-12 National Security Complex Bear Creek Burial Grounds (DOE/OR/01-2986&D1). NT-8 carries runoff and contaminants from the western end of the BCBG to Bear Creek, just a short distance from the western end of Zone 3. Uranium discharges in Bear Creek from Zone 3 have exceeded the surface water goals in the Record of Decision for the Phase I Activities in Bear Creek Valley since 2001. Previous investigations confirmed the eastern branch of NT-8 is the principal source of uranium, making this a trackable issue under the 2016



Information sharing session for addressing legacy soil contamination

Remediation Effectiveness Report evaluation requiring a final resolution. The Federal Facility Agreement triparties agreed to conduct a non-time-critical removal action to address these releases. The AM documents the selection of the non-time-critical interim removal action, which includes a geomembrane cap, surface water diversion controls, and surface water monitoring.

Bear Creek Valley Mercury Sources Remedial Site Evaluation

In FY 2024, OREM and UCOR conducted a remedial site evaluation to support the mercury management approach outlined for Bear Creek in the Environmental Management Disposal Facility Record of Decision (DOE/OR/01-2794&D2/R2). This evaluation did not identify a mercury source that significantly contributes to the Bear Creek mercury contamination or that would warrant active remediation. To identify potential source areas for mercury and methylmercury in the environment and determine if active remediation was warranted, OREM and UCOR sampled surface water, channel sediment, and stream bank and floodplain soils at 15 locations along Bear Creek and an offsite reference location. Routine fish tissue sample data was also evaluated. Although mercury was detected in the media sampled, concentrations are low compared to other Reservation mercury-contaminated sites, and fish tissue mercury concentrations continue to decrease.



East Tennessee Technology Park

The former Oak Ridge Gaseous Diffusion Plant began operations during World War II as part of the Manhattan Project. Its original mission was to produce enriched uranium for use in atomic weapons. The 2,200-acre plant was shut down permanently in 1987. All building demolition was completed in 2020 and remedial actions are now underway, facilitating the site's transformation into a multi-use industrial park.

Vision 2024: soil remediation completed at ETPP

OREM and UCOR have completed soil remediation at ETPP, marking another critical step in the transformation of the site into a community asset.

Initial estimates indicated that workers would have to excavate approximately 100,000 cubic yards of soil, but that amount increased as work progressed. By the end of the project, workers had removed and disposed of more than 554,000 cubic yards of soil, equaling nearly 50,000 dump truck loads.

Completion of this remediation, referred to as Vision 2024, comes four years after UCOR completed demolition of all unneeded facilities at the site. During this cleanup, OREM worked to transform ETPP into a multi-use industrial park, with 25 businesses currently operating at the site. It also focused on historic preservation and conservation, designating land for these purposes.

EM's reindustrialization efforts at ETPP are expected to generate 1,400 jobs from the \$1.35 billion in investments announced by the onsite companies.



Soil remediation at ETPP





OREM and UCOR officials joined local community and elected leaders at a special event to celebrate completion of this significant remediation milestone.

Transformation of ETPP has been underway for decades as workers demolished more than 500 facilities in conjunction with a reindustrialization program that brought several businesses to the site.

Clean energy technology has been a focus of these industrial development efforts. For instance, Kairos Power has just started construction of the Hermes Low-Power Demonstration Reactor at the site. This will be the first non-light-water reactor permitted in the United States in over 50 years. The company's \$100 million investment will bring 55 high quality jobs to the site. The ETPP landscape also features three solar array fields that harness the power of the sun to provide clean electricity.

With soil remediation completed, OREM will now focus on groundwater and surface water, the final remediation effort at ETPP.



Remediation at one of the EUs, EU-17. Below, the EU-21 team, which was tasked with the largest remediation subproject at ETPP



Records of Decision signed for ETPP groundwater

DOE joined the Environmental Protection Agency (EPA) and the Tennessee Department of Environment and Conservation (TDEC) in signing two Records of Decision (RODs) for groundwater remediation at ETPP. These RODs detail the planned remediation methods.

To conduct remedial activities, ETPP was divided into two sections. Each was approached with a different method of remediation.

One section is where the K-31 and K-33 gaseous diffusion buildings once stood. At this site, DOE's preferred alternative is monitored natural attenuation. This approach relies on natural processes to reduce the concentrations of contaminants in groundwater. It was the method selected to address groundwater contaminated with metals, primarily chromium and nickel, detected in concentrations above drinking water standards. Overall contaminant concentrations have been trending downward since the late 1980s, and no current exposure pathways exist that affect human health or the environment. Land use controls

will also be implemented to prohibit groundwater use and notify future landowners concerning the presence of contaminated groundwater.

For the rest of ETPP, called the main plant area, the remediation method selected is enhanced in situ bioremediation. This method involves using microorganisms to reduce contamination levels in specific areas of groundwater. For these areas, primary sources of contamination have been excavated as part of soil remediation efforts. That soil excavation will be followed with active treatment of the residual contamination that remains below the groundwater table.

Public meetings were held in 2023 on both proposed RODs to inform the public about the selected methods and solicit feedback.

A future Record of Decision will detail groundwater remediation efforts for the area surrounding ETPP.



A worker performs groundwater sampling activities on water extracted from ETPP



A lot of construction progress on the viewing platform was made in FY 2024

K-25 Viewing Platform on track to open in 2025

When the mile-long, U-shaped K-25 Building was demolished more than a decade ago, the only remnants of this uranium enrichment building was its massive foundation. However, from the ground, viewing the full footprint was impossible.

OREM is funding the construction of a viewing platform that will provide visitors a new perspective of the K-25 Building footprint to better understand the scope and magnitude of the site.

When the K-25 Building was built, it was the largest building in the world, and it was used to enrich uranium that helped the United States bring an end to World War II.

The K-25 Viewing Platform, with 10-foot-tall wrap-around glass windows, will provide a panoramic view of the K-25 Building footprint. The facility is being constructed by the U.S.

Army Corps of Engineers using contractor Geiger Brothers Inc. to manage construction. Visual indicators will be placed at each corner of the former building to illustrate the original dimensions and height of the structure. The facility is scheduled to open in 2025.



A sneak peek of what visitors will see from the viewing platform

ETTP embodies cleanup to clean energy

The OREM Reindustrialization Program’s vision for ETTP, following extensive environmental cleanup of the site, has led to the site becoming a hub for industry, particularly clean energy businesses.

Invested landowners, tenants, and a growing number of prospective companies are attracted to the ETTP location because of its existing infrastructure, local workforce development, and business-friendly environment—particularly clean energy businesses, due to the momentum achieved by federal and state initiatives and efforts to attract these industries and jobs.

Tennessee Governor Bill Lee announced in September 2024 that an international nuclear company has identified Oak Ridge as the location to build one of the largest uranium enrichment facilities in North America. That company plans to build that facility on land near ETTP that DOE is transferring to the community for reuse. The endeavor sends a strong signal that Oak Ridge is a hub that attracts nuclear energy industry.

This announcement followed the groundbreaking for the Hermes Low-Power Demonstration Reactor at ETTP in July 2024. This new facility is the first non-light-

water reactor to be permitted in the United States in more than 50 years. Thanks to the successful cleanup operations that made land available for economic development, ETTP and the Oak Ridge region are becoming a hub for clean energy and a nuclear renaissance.

In June, the Oak Ridge ETTP site was named the recipient of EPA’s 2024 National Federal Facility Excellence in Site Reuse Award for a facility on the Superfund National Priorities List. The award recognizes excellence in cleanup actions and working cooperatively with EPA to remediate a federal site for its beneficial reuse and creating positive impacts to the community. The project team demonstrated excellence in forming partnerships, performing cleanup actions, innovating beneficial reuse outcomes, and fostering economic development.

OREM has transferred over 1,700 acres for economic development at ETTP, including 470 acres during FY 2024. OREM and UCOR also completed the final transfer of major utilities, marking a significant milestone for the Reindustrialization Program. ETTP is now served by a public infrastructure system of water, sewer, electric, and natural gas utilities.



Kairos has begun construction of the Hermes Low-Power Demonstration Reactor at ETTP

Before cleanup



ETTP transformation completed

Decades ago, cleanup of the massive contaminated buildings at ETTP seemed like a daunting task. Many of the more than 500 structures at the site were contaminated with radioactive and hazardous constituents, spanning many acres. However, with the completion of demolition in 2020 and soil remediation wrapping up in FY 2024, ETTP is now a transformed site. It is a regional economic hub as well as a historic preservation destination. It is also serving as a base for clean energy production, bringing this historic site full circle as it once again fuels America and provides high-paying jobs for the region.

2024





Waste Management & Operations

Wastes generated from cleanup activities on the Oak Ridge Reservation are addressed in a variety of ways. Most of the volume is disposed onsite in the Environmental Management Waste Management Facility or the Oak Ridge Reservation Landfills. However, the highly contaminated material is shipped offsite. Wastewater is treated at various facilities on the Oak Ridge Reservation.

Most wastes continue to be disposed onsite

Most of the waste generated during FY 2024 cleanup activities in Oak Ridge went to disposal facilities on the Oak Ridge Reservation—the Environmental Management Waste Management Facility (EMWMF) and the Oak Ridge Reservation Landfills (ORRL). These disposal facilities are vital to cleanup success, enabling OREM to accomplish more cleanup by avoiding costly and unnecessary offsite waste shipments.

EMWMF receives low-level radioactive and hazardous soil and building debris for disposal that meets specific criteria. In FY 2024, EMWMF received 1,526 waste shipments from cleanup projects at ETPP, ORNL, and Y-12, plus 145 clean fill shipments for maintenance of the enhanced operational cover and construction of access roads and dump ramps. The EMWMF landfill has a design capacity of 2.331 million cubic yards and is now 85.3 percent filled.

EMWMF generated 12.02 million gallons of landfill wastewater in FY 2024. Workers transported approximately 3.42 million gallons of leachate by tanker to the ORNL Liquid and Gaseous Waste Operations (LGWO) for treatment and release. Workers released approximately 8.6 million gallons of contact water (water that contacts waste but does not enter the leachate collection system) to Bear Creek after verifying that it met regulatory limits and discharge standards.

ORRL accepts sanitary/industrial waste and construction/demolition debris. In FY 2024, these active landfills received 9,976 waste shipments, totaling 131,597 cubic yards of waste. ORRL compliantly discharged 3.8 million gallons of leachate from the active landfills to the Y-12 sanitary sewer system.

Construction/Demolition Landfill VII Area 5 expansion was completed in FY 2024, and the Spoils Area expansion was constructed to a 95 percent completion level. Work continued on seep mitigations for Sanitary Landfill II (a closed landfill) and active Landfill VII with recontouring of phases 2 and 3 completed. Landfill VII minor modification trenching continues with Trenches 1 and 2 completed during FY 2024.

In FY 2024, ORRL continued improvements for sediment and erosion controls. These measures



Completion of cap maintenance on Sanitary Landfill II

included upgrading drainage features, which significantly reduces the amount of sediment released from these landfills. TDEC inspections in FY 2024 noted excellent sediment and erosion controls with no areas of concern or violations.

The Environmental Management Disposal Facility (EMDF) and Landfill Operations projects found a beneficial use of soil and wood from the EMDF footprint as crews cleared space for the facility as part of the early site prep. This approach provides significant benefits to an existing closed DOE landfill as well as to the new landfill under construction. Excess mulch and soil from EMDF was used at Sanitary Landfill I – specifically, placing nearly 600 cubic yards of mulch around the landfill for erosion and sediment control and then placing about 40,000 cubic yards of soil as a maintenance action to recontour the area, improving drainage away from this area.

Wastewater treated in FY 2024

Process waste	109,385,420 gal
Low-level mixed waste	34,019 gal
Y-12	45,800,000 gal
Gaseous waste	791,709,308 m ³



Workers made great progress on EMDF construction in FY 2024

Early site preparation completed at EMDF

Workers continued construction activities at the Environmental Management Disposal Facility (EMDF). EMDF is needed to handle waste generated from ORNL and Y-12 cleanup as EMWMF is nearing capacity. Crews completed fieldwork for the early site preparation activities in May 2024. This work included rerouting portions of Bear Creek Road and the Haul Road, and development of other support areas.

Fieldwork for the Groundwater Field Demonstration (GWFD) began in April 2024. A cover system is being installed to replicate conditions following construction of the landfill liner system. Groundwater elevations will be monitored for two wet seasons following installation of the cover to ensure the liner system will be above the groundwater elevation in this area. Topsoil and clean fill removed from the EMDF area

during construction activities benefited other UCOR projects at ETPP.

OREM continues to work with EPA and TDEC on regulatory documents for the EMDF landfill. The GWFD Remedial Design Work Plan/Remedial Action Work Plan was approved in October 2023 and the Remedial Design Work Plan for the EMDF design was prepared and reviewed with approval in September 2024.

OREM continued to monitor 31 groundwater wells at the selected site for the disposal facility, measuring and recording water levels for much of the entire year. Several piezometers within the active construction area were not monitored but were protected for continued use when the GWFD construction is complete.

TWPC achieves significant inventory reduction

The Transuranic Waste Processing Center (TWPC) team completed a significant amount of hazardous inventory reduction in FY 2024 by safely and compliantly performing 12 shipments of legacy transuranic (TRU) waste to the Waste Isolation Pilot Plant (WIPP) in Carlsbad, New Mexico, totaling 301 drums of inventory reduction.

The TWPC team also completed 12 shipments of mixed low-level waste (MLLW), low-level waste (LLW), and hazardous industrial waste resulting from the processing and certification of the TRU legacy waste, totaling 15 boxes and 96 drums of MLLW, 24 boxes of LLW, and 62 drums of hazardous industrial waste inventory reduction. The TWPC team processed and repackaged 4 boxes and 13 drums of challenging Nuclear Fuel Services waste into 140 drums of compliant soil and debris for disposal.

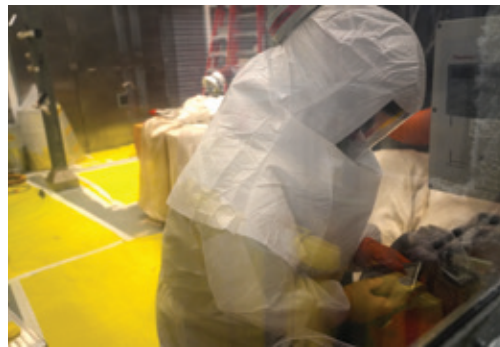
TWPC was one of the first facilities in the DOE complex to receive approval from the DOE Carlsbad Field Office for a new waste-treatment process for non-compliant cellulosic waste (cotton rags, cheesecloth, paper towels, etc.) that potentially contains oxidizing chemicals. In September 2024, the team began processing the cellulosic waste inventory containing more than 100 drums. After sorting cellulosic wastes from compliant waste, the team encapsulated the cellulosic material in grout and repackaged the waste into a compliant container for characterization, certification, and shipment.

TWPC operator UCOR is also preparing to add a new waste stream for processing non-reactive oxides.

TWPC has been working to complete Documented Safety Analysis implementation and readiness activities to support the venting and processing of oxide wastes. These facility modifications and additional controls will provide enhanced protection during processing of the oxides in the TWPC glove box.

UCOR began a life extension study on TWPC to identify actions necessary to transition the facility into a longer-term mission. The Phase I deliverable completed in April 2024 provided a snapshot of potential waste streams that require a longer operating life and the facility improvements or modifications that would be needed to support handling those streams. UCOR is continuing a more thorough analysis to highlight the current condition of the facilities and make recommendations for improvements/modifications.

Since TWPC is a Category II nuclear facility, the Defense Nuclear Facilities Safety Board (DNFSB) annually reviews the facility's safety measures. During the fiscal year, DNFSB representatives toured TWPC as part of an annual visit to Oak Ridge and no issues were identified.



Cellulosic waste processing



Did you know

Sample collection

Samples are taken for a variety of reasons—determining areas of contamination, evaluating the long-term effectiveness, and providing information for the disposal of remediation waste, among other reasons. In FY 2024,

20,570 samples

were collected, including soil, water, sediment, and biota.

Company to recycle BUP-500 generator

Through a new public-private partnership with Zeno Power Systems, Inc. (Zeno), OREM has reduced the amount of legacy radioactive material on the ORNL site. Zeno will recycle the material into a source of clean energy.

OREM, supported by UCOR, transported a radioisotope thermoelectric generator containing strontium-90 to a commercial nuclear facility out of state in FY 2024. Zeno will recycle the material at that facility to power its novel radioisotope power systems. The technology in these power systems is capable of converting heat generated by the decay of radioisotopes into a durable, reliable source of electricity in remote and challenging environments.

In 2023, Zeno announced it has more than \$40 million in government contracts to develop innovative radioisotope power systems for multiple domains

of interest across the U.S. Department of Defense. The company is also developing radioisotope power systems technology with NASA and other leading lunar industry companies to enable long-term lunar applications.

The transported equipment, the Byproduct Utilization Program (BUP) 500-watt radioisotope thermoelectric generator, was built in the mid-1980s at ORNL, but it was never deployed. The generator had been stored at ORNL for nearly 40 years, and before this new partnership, it was expected to remain in storage for another 30 years before OREM could dispose of it.

The equipment was previously stored at a facility that is scheduled for demolition at ORNL. This transfer accelerates the cleanup around that facility, avoids the costs associated with disposal, and significantly reduces liability at ORNL.



The BUP-500 radioisotope thermoelectric generator prepares to leave the Oak Ridge Reservation

New technologies can support cleanup operations

OREM and UCOR are performing technology development to support mercury and other types of cleanup on the Oak Ridge Reservation.

The Technology Demonstration Facility final design was completed and a construction subcontract awarded. The contractor will convert a former storage facility, the Disposal Area Remedial Action (DARA) facility near Y-12, into a test bed that will allow onsite testing of products intended for mercury hazard reduction.



Workers perform a demonstration of FerroBlack® technology

Officials completed initial treatability tests of products intended to reduce mercury vapor resulting in the selection of FerroBlack® for continued development. Safe use of FerroBlack® has the potential to significantly reduce mercury vapor generation as it is an active chemical capture process rather than an encapsulant—it chemically reacts with rather than simply encapsulating the mercury.

Sorbent packaging was tested through the ORNL Aquatic Ecology Lab, including an analysis of FerroBlack®'s sorption capacity and performance related to temperature and humidity. These tests will also be performed with other sorbents. Safe management of mercury-contaminated waste materials is critical to allow demolition of Y-12 facilities.

A cold test demonstration of the Building 3517 Digital Twin and Robotic Work Cell Project was completed at the ORNL Energy Systems Test Complex. The demonstration highlighted the many attributes of

the robot, its dexterity and seamless integration of the virtual and real worlds to create a safer work environment for workers in the very near future. Representatives from DOE Headquarters Technology Development Office, OREM, ORNL, Argonne National Laboratory, the Interagency Working Group, and UCOR attended the event, either in person or virtually.

UCOR completed a LiDAR scan of ORNL Building 3042, the Oak Ridge Research Reactor. The Technology Development team, in collaboration with Sandia National Laboratory, are exploring various new and safer ways to conduct deactivation and demolition activities by reducing facility entries required for characterization and deactivation planning.

A cold test of an automated mechanical nondestructive assay scanning system with data collection and analysis capabilities was completed. This work, being performed with Sandia National Laboratory, will reduce physical demands of scanning waste containers as well as significantly reduce the data management workload and reduce human-factor-data-entry error possibilities.



Public Involvement

The public is involved in cleanup decisions made by DOE. To keep the public informed, DOE provides information through a variety of outlets, including tours, meetings, briefings, conferences, media outreach, fact sheets, public notices, websites, social media, and various publications.

OREM and UCOR host cleanup update meeting



The cleanup update meeting provided DOE and UCOR officials the opportunity to discuss upcoming FY 2024 work

OREM's annual Fall Cleanup Update was hosted at the Scarboro Community Center in early FY 2024.

This event, cohosted by UCOR, provided outreach about the major cleanup projects underway across the Oak Ridge Reservation. The update featured

informative posters and videos that touched on next steps for EMDF, soil cleanup, groundwater remediation, and cleanup projects for 2024.

Participants also had the opportunity to speak with and ask questions of the project managers leading the projects.

Energycast production moves to new studio

Energycast, OREM's monthly newscast focusing on events on the Oak Ridge Reservation, moved into a new studio in May 2024.

The award-winning production provides the public important information on Reservation cleanup, public participation activities, and special features. The studio's interactive monitor, interview set, and state-of-the-art equipment allow OREM to more effectively tell the cleanup progress story in Oak Ridge.

Energycast also welcomed a new anchor, Allison Smith, who anchored *Good Morning Tennessee* on WATE-TV.



Allison Smith in the new Energycast studio



Advisory board encourages public input on DOE cleanup

The Oak Ridge Site Specific Advisory Board (ORSSAB) is a federally chartered volunteer citizens panel that provides independent advice and recommendations to OREM. ORSSAB meetings provide DOE and regulators at the U.S. Environmental Protection Agency (EPA) and the Tennessee Department of Environment and Conservation with a forum to communicate with and understand stakeholders' perspectives. Because all meetings are open to the public, it also serves as a venue for members of the community to express their views or ask questions.



ORSSAB members

In 2024, the board issued a recommendation on the site's budget request and discussed ongoing development of the planned new onsite waste disposal facility, the Environmental Management Disposal Facility. Since 1995, ORSSAB has provided nearly 300 recommendations to OREM on all important aspects of the cleanup program, such as land use and reindustrialization; stewardship; cleanup standards, activities and budgets; and waste management. Every major Record of Decision (ROD) developed under the DOE Office of Environmental Management has had heavy SSAB involvement, and none of the final RODs have been at odds with majority SSAB opinions.

This year, the Oak Ridge SSAB hosted the annual EM SSAB Fall Chairs Meeting, allowing board members to meet representatives from similar boards at other DOE sites across the country and receive updates from DOE leadership. Attendees toured the Oak Ridge sites of ETTP, ORNL, and Y-12 and heard about unique local efforts such as the public-private partnership to extract medical isotopes from processing uranium-233 for disposal as part of OREM's cleanup activities.

As part of their regular travel and educational offerings, board leaders also visited Portsmouth, Ohio, for the Spring Chairs Meeting. Other members traveled to a variety of conferences dedicated to

environmental management, cleanup, and long-term stewardship. These opportunities allow members to bring back knowledge to improve their service to OREM. This year, the board sent representatives to the Waste Management Symposia in Phoenix, Arizona; the Radwaste Summit in Louisville, Kentucky; and the National Cleanup Workshop in Arlington, Virginia.

Locally, members participated in meetings and tours related to OREM's Five Year Review Process, which allows it and partner agencies to assess the effectiveness of current remedies in protecting human health and the environment.

ORSSAB meets the second Wednesday of most months at 6 p.m. in Oak Ridge and virtually through Zoom. The board also has two standing committees. All meetings are open to the public and feature comment periods. Meeting videos are also posted to the board's YouTube channel, www.youtube.com/user/ORSSAB. Staff members also maintain an active social media presence at www.facebook.com/ORSSAB and publish a weekly email newsletter and a quarterly print and electronic publication, the *Advocate*. More information about the board and its activities is available at www.energy.gov/orssab or email questions to staff at orssab@orem.doe.gov.

Websites for Additional Information

DOE OREM Public Information
(865) 574-4912
www.energy.gov/orem

Oak Ridge Site Specific Advisory Board
(865) 241-4583, (865) 241-4584
1-800-382-6938
www.energy.gov/orssab

Tennessee Department of Environment
and Conservation–DOE Oversight Office
(865) 481-0995
<https://tdec.tn.gov/>

U.S. Environmental Protection Agency
Region 4
1-800-241-1754
www.epa.gov/aboutepa/about-epa-region-4-southeast

Commonly Used Acronyms

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
DOE	U.S. Department of Energy
EM	Environmental Management
EMDF	Environmental Management Disposal Facility
EMWMF	Environmental Management Waste Management Facility
EPA	U.S. Environmental Protection Agency
ETTP	East Tennessee Technology Park
EU	Exposure Unit
FFA	Federal Facility Agreement
FY	Fiscal Year
LGWO	Liquid and Gaseous Waste Operations
LLW	Low-Level Waste
MSRE	Molten Salt Reactor Experiment
NNSA	National Nuclear Security Administration
OREM	Oak Ridge Office of Environmental Management
ORNL	Oak Ridge National Laboratory
ORRL	Oak Ridge Reservation Landfills
ORSSAB	Oak Ridge Site Specific Advisory Board
RI	Remedial Investigation
ROD	Record of Decision
TDEC	Tennessee Department of Environment and Conservation
TRU	Transuranic
TWPC	Transuranic Waste Processing Center
U-233	Uranium-233
WIPP	Waste Isolation Pilot Plant
Y-12	Y-12 National Security Complex

DOE Information Center

The DOE Information Center is located at the Office of Scientific and Technical Information, Building 1916 – T1, 1 Science.gov Way, Oak Ridge, Tennessee 37831; Email: doeic@science.doe.gov; Hours: 8 a.m. to 5 p.m., Monday – Friday; <http://doeic.science.energy.gov>; Phone: (865) 241-4780

Commonly Used Terms

CERCLA

CERCLA: The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for hazardous waste releases at these sites, and established a trust fund to provide cleanup when no responsible party could be identified. The law, which governs cleanup operations on the Oak Ridge Reservation, authorizes two kinds of response actions: short-term removal actions, where actions may be taken to address releases or threatened releases requiring prompt response, and long-term remedial actions, which permanently and significantly reduce the dangers associated with releases or threats of releases. Long-term actions can be conducted at sites on the U.S. Environmental Protection Agency's National Priorities List, a listing of the nation's most hazardous waste sites. The Oak Ridge Reservation was added to that list in 1989.

FFA

Federal Facility Agreement: CERCLA requires an agreement between state and federal entities to guide cleanup work at CERCLA sites. For OREM, the parties of this agreement, called a Federal Facility Agreement, are DOE, the U.S. Environmental Protection Agency, and the Tennessee Department of Environment and Conservation. The Federal Facility Agreement for Oak Ridge was initiated in January 1992.

RmA

Removal Actions: Some cleanup activities on the Oak Ridge Reservation are conducted as Removal Actions under CERCLA. These actions provide an important method for moving sites more quickly through the CERCLA process. When a site presents a relatively time-sensitive, non-complex problem that can and should be addressed, a Removal Action would be warranted.

RA

Remedial Actions: Remedial actions are long-term response actions that seek to permanently and significantly reduce the risks associated with the release or threat of release of hazardous substances.

RI/FS

Remedial Investigation/Feasibility Study: The purpose of the remedial investigation/feasibility study (RI/FS) is to assess site conditions and evaluate alternatives to the extent necessary to select a remedy. Developing and conducting an RI/FS generally includes the following activities: project scoping, data collection, risk assessments, treatability studies, and analysis of alternatives. The scope and timing of these activities should be tailored to the nature and complexity of the problem and the response alternatives being considered.

ROD

Record of Decision: Under the CERCLA process, a Record of Decision (ROD) formally documents the selection of a preferred cleanup method after a series of steps, including an RI/FS. A preferred cleanup alternative is selected and presented to the public for comment in a Proposed Plan. EPA, the state, and the lead agency then select a remedy and document it in the ROD.

Fiscal Year: The 2024 fiscal year spans from Oct. 1, 2023, to Sept. 30, 2024.



For more information, please contact
the DOE Oak Ridge Public Affairs Office at (865) 574-4912.

