



Advocate

A publication of the Oak Ridge Site Specific Advisory Board – a federally appointed citizens panel providing independent recommendations and advice to DOE’s Environmental Management Program

OREM Achieves Calendar Year 2021 Mission & Priorities

DOE’s Oak Ridge Office of Environmental Management (OREM) completed the ambitious goals laid out for the site in EM’s 2021 priorities.

Each year, EM releases its priorities for the coming calendar year, a key marker to the cleanup program’s continuing success in addressing the legacy of nuclear weapons production and government-sponsored nuclear energy research. The Calendar Year 2021 Mission and Priorities outlines specific planned accomplishments across the cleanup complex for the year.

“Through the work ethic and dedication of our federal and contractor workforce, Oak Ridge continues to reinforce its reputation as a site that completes its projects on time and on budget,” OREM Acting Manager Laura Wilkerson said.



OREM completed two transfers at the East Tennessee Technology Park this past summer. Both transfers preserve areas with historic significance.

(See Priorities on page 6)

New Board Members Wanted: Apply by February 28

ORSSAB is seeking new board members to fill vacancies on the board in 2022. All adult residents of the multi-county area surrounding Oak Ridge are encouraged to apply. Applications are available on the board’s website and can be requested by phone or email.

“The recommendations from this board and the perspective of its members are incredibly valuable to our program, and they help influence and guide our decisions-making,” said Laura Wilkerson, OREM acting manager. “Membership is the best, most direct way to understand the environmental cleanup underway, interact with project

managers, and to make your opinions known to DOE.”

As a citizens advisory board, technical expertise is not required. ORSSAB strives to reflect the broad spectrum of backgrounds and viewpoints from residents in the counties surrounding the DOE Oak Ridge Reservation.

“ORSSAB’s purpose is to capture and reflect the opinions and perspectives of the residents here,” said Dave Adler, the board’s deputy designated federal officer. “We are interested in the input of anyone who lives or works in the area, not just scientists or engineers – whether a recent graduate, caregiver, bank teller,

small business owner, or retiree. Each can possess and share valuable points of

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Reservation Update



Crews installed a new truck scale at the Oak Ridge Reservation Landfill earlier this year as part of upgrades to waste management operations at Oak Ridge.

Oak Ridge Upgrades Waste Shipment Tracking System

OREM contractor UCOR recently transitioned to a new waste tracking system that improves how shipments are tracked from work sites to disposal locations.

The new system includes an upgraded radio frequency identification (RFID) tracking system for trucks and new hardware and software, allowing for a seamless, automated tracking operation that delivers up-to-the-minute waste disposal data.

Waste management is a major element of UCOR's cleanup operations. The contractor has completed more than 120,000 on-site and off-site shipments that account for 1.7 million cubic yards of waste, and UCOR has logged 7.6 million miles safely since it began work in Oak Ridge in 2011.

RFID technology is the linchpin of this modernization effort. Each truck is equipped with a unique card that identifies it in a database. As a vehicle moves between locations, the card logs those moves and registers data within the database. These unique identifiers

streamline the process and save time at disposal sites by eliminating the need for manual identification and data input by waste management personnel.

The RFID technology is being rolled out in phases, and the entire fleet of vehicles will be upgraded by the end of the year.

The most significant physical upgrade was the installation of a truck scale at the Oak Ridge Reservation Landfill. It can accommodate full-size semi-trucks and complements the two existing scales at the Environmental Management Waste Management Facility and the transportation hub at the East Tennessee Technology Park.

When linked with RFID technology, the scales deliver information directly to the database. The database accepts weight data collected at the scales and uses the associated RFID information to track trucks from empty to loaded as they cross the scale at a disposal location.

The database was the final piece of the upgrade. The custom-designed software consolidates eight legacy database and tracking functions, delivering a standardized data format that eliminates incompatibilities between systems. The

new database also reduces the need for data to be transmitted manually, decreasing the potential for input error.

Workers Dispose Low-Dose Wastes, Support Research

OREM and its contractor Isotek in October successfully completed processing and disposing the low-dose inventory of uranium (U)-233 stored at ORNL, ending a two-year effort that has eliminated a portion of the site's legacy nuclear material and provided rare nuclear isotopes for next-generation cancer treatment research.

OREM and Isotek will now focus on treating and disposing the remaining high-dose U-233 inventory stored at ORNL. Eliminating the inventory of U-233 is EM's highest priority at ORNL. U-233 is a manmade isotope created as an alternative nuclear fuel source in the 1950s. The nation's inventory of U-233 was later sent to ORNL for long-term storage.

OREM finished disposing approximately half of the U-233 inventory in 2017, while the remainder of the material required processing and downblending to convert it into a form for safe shipment and disposal.

An initial approach involved processing all of the remaining inventory in heavily shielded rooms, known as hot cells. However, the building where this would occur required significant upgrades before that work could begin.

Isotek identified a subset of the U-233 material with lower radioactivity levels that employees could begin processing in gloveboxes while other crews prepared the hot cells to address the U-233 material with higher radioactivity levels. This approach was made possible through a unique partnership with TerraPower, a private nuclear innovation company.

Isotek received funds from TerraPower to extract thorium isotopes from the U-233 inventory. Through this arrangement, TerraPower received



An Isotek employee processes low-dose uranium-233 material in a glovebox at Oak Ridge National Laboratory.

rare medical isotopes to advance next-generation cancer treatment research, and Isotek received funds it reinvested in the project to purchase gloveboxes and accelerate the processing schedule, saving significant tax dollars.

With upgrades and installation of new equipment complete, Isotek is slated to begin its next phase of the disposition campaign in early 2022: processing canisters with the high-dose U-233 material. The heavily shielded hot cells protect workers and allow them to handle the material using remote manipulators. This upcoming phase will enable Isotek to enhance productivity by processing larger amounts of U-233.

Earlier this year, DOE awarded the Thorium Express Project a Secretary of Energy Achievement Award, one of the Department's highest honors.

Crews Remove More Mercury from Y-12 COLEX Equipment

Crews recently deactivated the second of three areas of old, mercury-contaminated equipment surrounding the Alpha-4 facility at the Y-12 National Security Complex at Oak Ridge.

The project addressed potential environmental risks and moved EM a step closer to preparing one of Y-12's largest high-risk contaminated facilities for demolition.

The column exchange, or COLEX, structures are connected to the four-story 500,000-square-foot Alpha-4 building, which was used for uranium separation from 1944 to 1945. Workers finished installing the COLEX equipment in 1955 for lithium separation, a process requiring large amounts of mercury. A significant amount of the mercury was lost into the facilities and surrounding soils, and its cleanup is one of EM's top priorities.

In 2018, cleanup contractor UCOR demolished the COLEX equipment on the west end of the building after retrieving 4.6 tons of mercury. The effort prevented a possible significant release of mercury into the surrounding environment. In April, UCOR began deactivating the COLEX structures on the east end of the building. The final portion of the COLEX equipment, located on the south side of Alpha-4, will be addressed in future years.

EM is also advancing construction on the Mercury Treatment Facility, the key for EM's cleanup strategy at Y-12. It will prevent potential mercury releases into a nearby creek and allow EM to demolish massive mercury-contaminated buildings and address sources or mercury in the soil beneath them. The facility, scheduled to begin operating in 2025, will treat up to 3,000 gallons of water per minute.



Oak Ridge workers remove mercury and mercury-contaminated solids from process pipes in the column exchange, or COLEX, equipment at the Alpha-4 facility at Y-12.

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Chairs Consider Memberships, Strategic Visions, and Public Outreach

ORSSAB board officers joined other Environmental Management Site-Specific Advisory Board (EM SSAB) officers in approving three recommendations during the annual EM SSAB Fall Chairs Meeting on October 6-7.

The meeting was held virtually this year due to travel and social distancing restrictions.

The event was livestreamed and recordings and materials are available from both days' events at www.energy.gov/em/articles/chairs-meeting-october-2021.

Each spring and fall, officers from SSABs across the country join to meet with DOE officials to discuss the latest happenings around the EM complex. Often, the officers will discuss and vote on recommendations. This year DOE officials and chairs continued discussion and approved recommendations on two charges introduced during 2020's Fall Chairs Meeting.

For the first charge, the boards were asked to identify existing outreach practices being performed at their respective sites and determine whether there are any gaps or need for additional outreach. This outreach could include any activities done by either the board itself, DOE and its contractors or both.

In response to this charge, officers gathered data from each of the sites and presented their findings during the Spring 2021 Chairs Meeting in April. The resulting recommendation approved during the October meeting outlined both thematic and specific recommendations for improvement to DOE EM.

Kelly Snyder, designated federal officer for EM SSAB and the Environmental Management Advisory Board (EMAB), told members this recommendation would be used to develop a best practices white paper that can serve as a guide to expand on existing outreach activities.

For the second charge, each board was asked to consider what EM's "Mission



Mark Gilbertson, associate principal deputy assistant secretary in the EM office of regulatory and policy affairs, discusses EM's sustainability and climate action activities during the 2021 Fall Chairs Meeting, held virtually in October and livestreamed online.

Complete" looks like at their respective sites and the board's expectations for how DOE will interact with their local stakeholders and communities to reach that vision.

The officers used this information to identify commonalities and develop a complex-wide framework for SSAB expectations and guiding principles in drafting long-term strategic visions. The resulting recommendation offers suggestions covering 10-Year Strategic-Plan Development, Communication, Public Involvement, and Risk Communication.

Members also approved a third recommendation aimed at revising the SSAB member appointment process.

ORSSAB members will consider approval of each of the three Chairs Recommendations during a future meeting.

During the event, officers from each SSAB presented updates on their board's FY 2021 activities and plans for FY 2022. DOE speakers provided attendees with news from DOE headquarters and an overview of activities across the complex.

Todd Shrader, principal deputy assistant secretary, detailed cleanup

progress at DOE sites across the country including the completion of Oak Ridge's Y-12 Biology Complex demolition. Additionally, he discussed EM's updated Strategic Vision Plan, which covers 2020-2030. More information on the strategic vision and a downloadable PDF of the document is available from DOE at www.energy.gov/em/articles/em-issues-strategic-vision-coming-decade. EM also encourages feedback on the included project priorities, end state vision, and opportunities for acceleration at StrategicVisionFeedback@em.doe.gov.

Mark Gilbertson, associate principal deputy assistant secretary in the EM office of regulatory and policy affairs, gave board members an overview of recent personnel changes within the EM organization, as well as current regulatory activities. He discussed recent EM activities advancing environmental sustainability, climate action, and environmental justice.

"We do want [EM] to be a leader for the federal government on climate action," said Gilbertson.

(See Chairs Meeting on page 5)

Wilkerson Now Acting OREM Manager, Mullis Fills Headquarters Role

A temporary assignment at DOE headquarters in Washington, D.C. for OREM Manager Jay Mullis has put deputy manager Laura Wilkerson at the helm as acting OREM manager as of November 2020.

"The primary reason I was comfortable accepting this challenge is because of the confidence I have in the entire Oak Ridge EM team and in Laura's ability to step in and lead," Mullis said. "The team's technical ability and dedication to the environmental cleanup mission here gives me great pride and comfort, and I know they will continue to advance this important work."

Mullis is now serving as the acting associate principal deputy assistant secretary (APDAS) for regulatory and policy affairs for DOE EM, replacing Mark Gilbertson, who recently retired. Mullis will continue in the position until a permanent replacement is selected.

Wilkerson has been deputy manager since 2019 but has more than 25 years of experience with DOE. During her career, Wilkerson has served in a variety of positions that spanned every major programmatic area of DOE's work in Oak Ridge.

Originally from Puerto Rico, she began her career with DOE immediately after graduating from college with a degree in industrial



Laura Wilkerson, left, with Jay Mullis at the February 2019 ORSSAB meeting. Wilkerson is now serving as acting OREM manager after Mullis took on the role of acting associate principal deputy assistant secretary (APDAS) for regulatory and policy affairs for DOE EM.

engineering. She spent 10 years as part of the team that launched the ETTTP Reindustrialization Program and was responsible for the first of many successful transfers from DOE to the Community Reuse Organization of East Tennessee. She also served as a senior technical advisor to the manager of the Oak Ridge Operations office. Prior to that, she was portfolio federal project director for Y-12 and ORNL

projects. There, she oversaw the \$630 million OREM received in American Recovery and Reinvestment Act funds for cleanup at those sites—directing the successful completion of more than 30 projects. She was also deputy federal project director for Uranium-233 disposition. In the planning division, she oversaw all planning and execution activities related to the cleanup at ETTTP, Y-12, and ORNL.

Chairs Meeting

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Finally, Gilbertson gave board members an overview of recent regulatory and policy updates, including activities related to per- and polyfluoroalkyl (PFAS) substances, High Level Waste Interpretation, tribal and intergovernmental engagement, and trilateral activities among EM, the United Kingdom's Nuclear Decommissioning Authority (NDA),

and Canada's Atomic Energy of Canada, Ltd. (AECL).

Day one of the event also included information about membership recruitment and approvals process as they relate to DOE headquarters. Snyder gave members a detailed overview of the process headquarters uses to review and approve each site's membership submission packages.

On day two, Steve Trischman from EM's office of budget and planning gave an overview of the budget process with a focus on how stakeholders are involved

at key points. He also reviewed the use of the FY 2021 enacted budget, the FY 2022 outlook, and progress on EM's FY 2023 budget request. All budget requests are for two years in the future to allow discussion and Congressional approval. Congress is expected to release a budget in February.

The next EM SSAB Chairs Meeting will be held in Spring 2022 and is tentatively planned to be held in Paducah, Ky.



Demolition began on the last remaining facility in the Biology Complex at Oak Ridge in March. Building 9207 stood six stories tall and spanned 255,000 square feet. Tear-down of the final buildings — 9207 and 9210 — generated 118 million pounds of debris.

Priorities

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OREM had three entries in EM’s 2021 priorities. They include completing demolition of the Biology Complex, transferring property at East Tennessee Technology Park (ETTP) to the community, and awarding the Oak Ridge Reservation Cleanup Contract.

Demolishing the former Biology Complex at the Y-12 National Security

Complex wrapped up in June and created the biggest skyline change at Oak Ridge this year. The project involved significant deactivation efforts and cleared away facilities that spanned 330,000 square feet and stood up to six stories tall. Crews removed 3.5 million pounds of asbestos and waste from the deteriorating 1940s-era facilities prior to their teardown.

(See Priorities on page 7)



A view of the Biology Complex slab after demolition. Workers are actively removing the buildings’ foundations, which is slated for completion early next year.



Join Us for an Overview of the Federal Advisory Committee Act

6 p.m. Wednesday, February 9
virtually via Zoom

Learn more about the Federal Advisory Committee Act (FACA) and its role related to SSABs’ guiding principles, functions, responsibilities, and more.

To receive an invite to the virtual meetings, members of the public are asked to sign up at least one week in advance by emailing board staff at orssab@orem.doe.gov.

Questions? Contact us at 865-241-4584 or orssab@orem.doe.gov

Priorities

(Continued from page 6)

That EM 2021 priority eliminated significant structural risks, and it opens an 18-acre area to support national security missions at the site. Workers are slated to finish removing the buildings' foundations early next year, the final step before the land is available for reuse by the National Nuclear Security Administration.

At ETTP, OREM continues progress toward its ultimate vision of transforming the site into a multi-use industrial park. After nearly two decades, all demolition is complete and hundreds of acres of land are available for reuse to attract new businesses and economic development, create

conservation areas, and preserve and share ETTP's history.

OREM has transferred nearly 1,300 acres at ETTP to the community to date for industrial development. Two transfers completed this summer preserve areas with historic significance, including one of the site's main entryways — known as Portal 4. It's expected to be refurbished and repurposed for new office space.

Oak Ridge accomplished its third and final 2021 priority with the award of the Oak Ridge Reservation Cleanup Contract to United Cleanup Oak Ridge (UCOR) in late October. The new contract will span 10 years and has an estimated value of up to \$8.3 billion.

The contractor will be responsible for soil and groundwater remediation

at ETTP; cleanup of excess contaminated facilities at the Oak Ridge National Laboratory and Y-12; and operational activities and surveillance and maintenance for numerous facilities across the Oak Ridge Reservation.

"I'm very proud of what we've accomplished this year, which extends beyond the three items listed. We also made progress in many other areas that positions our program for more successes and priority completions next year," Wilkerson said.

FY 2022 ORSSAB Workplan Topics

Board recommendations are based on topics presented by DOE at the board's monthly meetings.

The board meets the second Wednesday of most months. In-depth discussion follows in the EM & Stewardship Committee meeting on the fourth Wednesday.

In order to practice social distancing, ORSSAB meetings will be held virtually until further notice.

To receive an invite to the virtual meetings, members of the public are asked to sign up at least one week in advance by emailing board staff at orssab@orem.doe.gov.

The Work Plan is a living document that may change based on the board's needs or requests for input by DOE.

February

Overview of the Federal Advisory Committee Act, which governs ORSSAB and a number of other boards throughout the federal government.

March

Discussion of OREM's FY 2024 budget process, planned request, and input from the board on prioritization of projects within available funds.

April

Participation in the Spring EM SSAB Chairs Meeting,

hosted by the Paducah Citizens Advisory Board in Kentucky (virtual or in-person attendance TBD).

May

Review of waste disposal capacity needs and availability on the Oak Ridge Reservation and an update on the proposed Environmental Management Disposal Facility.

June

Discussion of groundwater remediation with updates on the near-term projects to complete full cleanup at East Tennessee Technology Park.

July

No meeting due to new member training/tours. Tours are open to new and current ORSSAB members.

August

ORSSAB Annual Planning Meeting. Members will be joined by representatives from DOE and regulators from EPA, and TDEC to review 2022 and plan for 2023.

September

Participation in the Fall EM SSAB Chairs Meeting, hosted by the Northern New Mexico Citizens Advisory Board in Santa Fe (virtual or in-person attendance TBD).

ORSSAB Welcomes Two New Members

In October ORSSAB welcomed two members to the board.

Thomas Geissberger (Knox County) works at the Knoxville Area Rescue Mission and was previously employed as a team director for the Tennessee Clean Water Network. He graduated with a bachelor's in geology and environmental studies from the University of Tennessee, Knoxville in 2020. Thomas is a member of the Phi Sigma Theta and Phi Kappa Phi honors societies, completed the tnAchieves Program, and was selected for the Oak Ridge Associated Universities Higher Education Research Experience Program during his time as a student. He is interested in environmental and public health issues.

Lorna Hollowell (Knox County) has served as the assistant director of education and development in the Office of Equity and Diversity at the University of Tennessee, Knoxville since September 2019. She holds a master's in education from the University of Minnesota, Duluth and a bachelor's in organizational management from Oakland City University.

Lorna is currently pursuing a Ph.D. in higher education administration from the University of Tennessee and expects to graduate in 2026. She is interested in educational issues and minority issues

Recruitment

(Continued from page 1)

view for the board.”

The board generally draws from Anderson, Blount, Campbell, Knox, Loudon, Meigs, Morgan, Roane and Union counties.

ORSSAB has produced nearly 300 recommendations in its 25-year history. All major cleanup decisions by DOE have included board input and none have gone against the board's majority opinion.

Topics include, but are not limited to, removal of excess facilities, annual budget requests to Congress, groundwater remediation, hazardous waste management and long-term stewardship.



ABBREVIATIONS
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act, also known as Superfund
DOE – Department of Energy
EM – Environmental Management
EMWMF – Environmental Management Waste Management Facility
EFTP – East Tennessee Technology Park
OREM – Oak Ridge Environmental Management
ORNL – Oak Ridge National Laboratory
ORR – Oak Ridge Reservation
ORSSAB – Oak Ridge Site Specific Advisory Board
TDEC – Tennessee Department of Environment & Conservation
UCOR – URS CH2M Oak Ridge
Y-12 – Y-12 National Security Complex

UPCOMING MEETINGS
Meetings are held at 6 p.m. virtually until further notice. Email orssab@orem.doe.gov at least 1 week prior to attend or comment.
Board: February 9 on the Federal Advisory Committee Act
EM & Stewardship Committee: February 23

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