



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

K-25 History Center Tells the Stories of Workers That Made Oak Ridge's Top-Secret Mission a Success



Scores of attendees pack the lobby of the new K-25 History Center at the East Tennessee Technology Park on February 27 for the center's grand opening celebration and ribbon cutting ceremony.

The new K-25 History Center at East Tennessee Technology Park (ETTP) opened to the public in February with a grand opening celebration and ribbon-cutting ceremony.

"As a K-25 person who was there for 34 years, I am impressed," said Bonnie

Shoemaker, ORSSAB secretary and the board's consulting party representative. "It's really worth your visit; it's been really well done."

The history center was created to honor and preserve the stories of the men and women who helped construct

and operate the K-25 uranium enrichment complex – a facility that altered the global landscape during World War II and the Cold War.

(See Museum on page 6)

25 Years of ORSSAB Involvement

The completion of the K-25 History Center is a project two decades in the making and one that many members of ORSSAB have considered a vital part of the board's historic preservation commitments.

Historic preservation activities began in 1998 with an agreement regarding

the removal of Buildings K-29, K-31, and K-33. The first Memorandum of Agreement (MOA) on K-25 (and K-27) was signed in 2003 by parties including ORSSAB. That agreement also directed DOE to establish an oral history program.

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Reservation Update

OREM Modernizes Critical Wastewater Treatment System

EM workers are making progress upgrading aging radiological wastewater treatment infrastructure essential to ORNL operations.

They are installing a new zeolite treatment system, which is designed to remove cesium and strontium from wastewater.

Installation of that system is the latest modernization effort funded by a \$17 million investment over the past two years to extend the life of the Liquid and Gaseous Waste Operations (LGWO) infrastructure, which is more than four decades old. It consists of numerous interconnected facilities that support crucial waste treatment activities for EM and DOE's Office of Science. Due to its age and deteriorated condition, Building 3544 presented one of the largest risks to the LGWO. Crews have replaced deteriorated piping, antiquated equipment, and failing electrical systems.

EM investigated several alternatives before choosing to install a modernized zeolite treatment system at Building 3608, which formerly handled non-radiological wastewater treatment.

OREM cleanup contractor UCOR is installing the new system. It includes five vessels — two dual media filters and three zeolite columns — and dewatering equipment.

New UCOR Unit Focused on Historic Preservation, Reuse

In February, UCOR created a new group within the company, the End State and Federal Land Reuse Organization.

The team will be led by Scott Anderson, who is a former waste disposition manager for UCOR and most recently served as president and general manager of the West Valley Demonstration Project in New York. He is responsible for all aspects of reindustrialization and closure of ETTTP



A crane lowers one of the five new vessels for a new modernized zeolite treatment system at Building 3608 at ORNL. It replaces an aging system in Building 3544.

as well as the new Heritage Center Enterprise.

Kevin Ironside will report to Anderson as the reindustrialization manager for ETTTP. Ironside was named manager in January, he has been part of the reindustrialization program for about seven years.

The third member of the team is Michelle McNutt, who will manage property, real estate and records activities.

OREM Promotes from Within for ORNL Cleanup Position



Nathan Felosi

Nathan Felosi has been named OREM's federal project director for cleanup at Oak Ridge National Laboratory (ORNL).

Felosi oversees all of the planned and ongoing environmental cleanup operations at ORNL. That work includes decommissioning and demolishing former nuclear research and isotope

production facilities, eliminating the inventory of uranium-233 stored at the site, ensuring aging buildings and waste treatment systems remain safe, and completing the processing and disposal of remaining transuranic waste.

He was previously the engineering branch chief for OREM and brings more than 21 years of experience to the new role. Felosi is a registered Professional Engineer and earned his bachelor's degree in civil engineering from the University of Tennessee.

Felosi replaces long-time director Bill McMillan. McMillan retired at the end of 2019 after serving more than seven years in the position and more than three decades with DOE that included assignments locally at Y-12 and at the Savannah River Operations Office.

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EM Leadership Outlines Major Goals on Track for 2020 to 2030

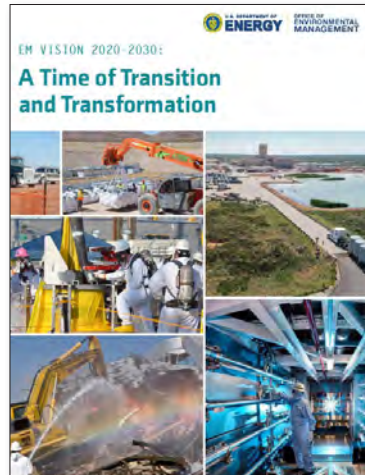
Ike White, senior advisor to the Under Secretary for Science overseeing EM, told stakeholders at the annual Waste Management Symposia that EM will complete several long-running construction projects this year and be able to shift to waste treatment operations at sites like Savannah River, Idaho, and Hanford.

Oak Ridge will realize the Vision 2020 goal of completing core cleanup at the East Tennessee Technology Park and construction will begin this year on a new utility shaft at the Waste Isolation Pilot Plant to provide added ventilation and more flexibility for mining.

White said these and other planned accomplishments not only will reduce environmental risks significantly but also demonstrate EM's ability to maintain progress, strengthening the case for resources to continue the mission.

He also laid out DOE's strategic vision for environmental cleanup over the next decade, saying the program is poised for "step change" that will build on its record of successes. Those plans

are detailed in the new publication, "EM Vision for 2020-2030: A Timeline of Transition and Transformation."



The report notes 2020 will include major changes for EM as a majority of sites will transition to new prime contractors under the revamped end-state contracting approach. The organization is also developing a new Cleanup Project Management Policy based on the latest best practices.

Recognizing that a large portion of its specialized workforce will soon be eligible for retirement, an emphasis is being placed on a strong recruitment strategy from student internships and college partnerships to targeted programs for veterans. Early-career professionals will be encouraged to work with experienced employees to ensure knowledge transfer to a new generation of the workforce.

The report includes sections for each EM cleanup site. Here are some Oak Ridge highlights:

2021 - Complete demolition of Y-12's Biology Complex

2022 - Complete research at the Sludge Processing Mockup Test Facility

2024 - Complete remaining soil and groundwater remediation at ETTP

2025 - Complete construction of Outfall 200 Mercury Treatment Facility and finish removing ORNL's inventory of uranium-233

2026 - Complete shipment of legacy transuranic waste debris to WIPP

GAO Recommends Improvements to EM's Gaseous Diffusion Cleanup

While OREM nears completion of cleanup at ETTP, two other sites are preparing to ramp up their efforts as funding transitions to them. A recent report from the Government Accountability Office (GAO) looks at cleanup at all three sites.

The report said EM has made progress in cleaning up DOE's three former gaseous diffusion plants (GDPs)—particularly at Oak Ridge where contractors have demolished all five uranium enrichment processing buildings measuring a combined 114 acres as well as most other supporting buildings and facilities—but notes that future work remains.

The GAO made five recommendations on how the Portsmouth, Ohio and Paducah, Ky. sites can improve the process based on

lessons learned at Oak Ridge.

1. Take steps to manage the GDPs as an integrated program and follow relevant program management leading practices
2. Track consistent and detailed expenditure information on cleanup activities across the GDPs
3. Ensure the site-specific lifecycle cost estimates for the cleanup of each of the GDPs fully incorporate best practices for cost estimation
4. Work—in conjunction with regulators—with an

independent, third-party facilitator to help resolve disagreements over cleanup

5. Report on the status of the D&D Fund and cleanup efforts at the three GDPs with current information that contains details on challenges in reaching agreement with regulators and a clear scope of work

DOE concurred with four of the recommendations and partially concurred with the third recommendation on site-specific lifecycle cost estimates.

RESOURCE

The GAO report, "Actions Needed to Improve Cleanup Efforts at DOE's Three Former Gaseous Diffusion Plants," is available at www.gao.gov/products/GAO-20-63

Board Member Steve Stow Championed Importance of Oral Histories



This story is part of ORSSAB's 25th Anniversary coverage. We'll feature items from board's history all year.

In 2007 Steve Stow, board member and former director of the American Museum of Science and Energy, met with the Executive Committee to present a white paper discussing the need to “have a comprehensive oral history program for Oak Ridge that consolidates existing oral histories in one location, develops a process by which oral histories can be indexed and made available to interested parties, and that sets standards for conducting and archiving future oral histories.”

A historic preservation agreement in 2003 directed DOE to collect oral histories, but many groups were also making those records. As a result they difficult to locate and use. Stow's solution was to create a database that all organizations could use and send copies of their records to (while retaining the originals if they chose).

Recommendations and public input followed. Ultimately, the result would be

the Center for Oak Ridge Oral History (COROH), which started in 2008 as part of the Oak Ridge Public Library with startup money from ORSSAB. It began consolidating about 300 oral histories. The next year, COROH used a \$150,000 grant from DOE to begin a new round of interviews. Stow

and fellow historian D. Ray Smith conducted many of the interviews. Today's collection includes nearly a thousand histories.

Transcripts and some videos of interviews are available online at www.oakridgetn.gov/departments/Library/Departments-%26-Services/COROH.

Interviews of ORSSAB members



Darrell Akins



Rhonda Bogard



Spencer Gross (Staff)



David Mosby



Bob Olson



Bob Peelle



Patricia Rush



Steve Stow

History

(Continued from page 1)

An agreement for another 108 structures at the K-25 Main Plant and Powerhouse areas followed in 2004.

The K-25 MOA was revisited in 2005 due to concerns with saving the badly deteriorated North Tower and several other structures. As part of that effort DOE collected and stored more than 700 artifacts from ETTP and undertook several other methods to digitally preserve information about the buildings that could not be saved.

Consulting parties, including ORSSAB, met several times between 2005 and 2012 to come to a new agreement that reflected the unsafe nature of some of the structures that

were previously supposed to be saved. Steve McCracken, then OREM's manager, came to the board to ask for its input. He also set a timetable to talk to a cross-section of the community and other interested organizations.

ORSSAB co-hosted a meeting on the subject and crafted two recommendations in 2008, which also served as useful guidelines for preservation efforts on other facilities, ensuring they would not be lost. Additional recommendations followed in 2009, 2010, and 2011. Those ideas and input from other organizations -- notably the Partnership for K-25 Preservation -- at various public meetings led to a new MOA in 2012 that removed requirements to preserve the North Tower, retain parts of the K-25 building itself, and preserve

portions of the Roosevelt Cell. It also outlined plans for the K-25 History Center; plans that came to fruition with the history center's February 2020 grand opening.

But that's not the end of the story. The agreement was amended in 2019 to better reflect changes including additional time needed for review of materials and cooperation with the Manhattan Project National Historical Park, which includes part of the K-25 site in its boundaries.

The amendment gives OREM an additional five years to construct an equipment building and viewing tower to complement the History Center and create 12 wayside exhibits and related self guided tour brochures that will help take advantage of the partnership with the national park.

OREM Cleanup Crews Start Demolition of Last ETTP Lab Facility

In February EM and cleanup contractor UCOR started tearing down the second of four sections of the Centrifuge Complex, one of the most recognizable ETTP landmarks as the largest and tallest facility remaining at the site.

Workers are now demolishing a nearly 83,000-square-foot section known as the Advanced Machine Development Laboratory and Component Preparation Laboratory. It was used from 1975 to 1985 to develop machines and manufacturing processes for centrifuges. More recently, it was leased by Materials and Energy Corp. for commercial waste operations and in support of processing DOE waste. That lease ended last year.



Workers are demolishing the K-1200 building of ETTP's Centrifuge Complex. The K-1004 lab was demolished earlier this year.

Resources for Understanding DOE's Budget

By now, you may have seen news about Congress discussing the fiscal year (FY) 2021 budget, which starts in October of 2020. But did you know at the site level, like in Oak Ridge, federal programs are already starting plans on their FY 2022 requests? That's because the federal budget process reflects the need for consolidation and prioritization at progressively higher levels as well as following checks and balances designed into our government.

The constant momentum on budget planning ensures that, for OREM, the cleanup mission can continue smoothly year in and year out.

The SSABs have been included in budget discussions since 2007 and the board's recommendations are included in OREM requests. We welcome input during public comment as we prepare this year's response. At the board's May meeting, representatives from the Oak Ridge Manager's Office and the Planning and Execution Division will explain how OREM requests funding, what it receives, and how the money is spent. In the meantime, you can

better understand the overall process by following some of the discussions around the FY 2021 budget.

The President's Budget Request for FY 2021 totals \$35.4 billion for the Department of Energy. Of that, \$6.1 billion is meant for environmental cleanup to meet regulatory requirements. But, ultimately, it's up to Congress to develop spending bills, vote and pass a final budget.

Secretary of Energy Dan Brouillette discussed the DOE budget in the House of Representatives Subcommittee on Energy and Water Development, and Related Agencies in February. Video is available at <https://appropriations.house.gov/events/hearings/department-of-energy-budget-request-for-fy2021>.

The Senate Committee on Energy and Natural Resources considered the budget in March. View the meeting video at www.energy.senate.gov.

Full documentation of the DOE budget requests past and present are publicly available online at www.energy.gov/cfo/listings/budget-justification-supporting-documents



No April Meetings

As the United States responds to COVID-19, many of you have expressed concern about participating in board meetings.

In response, and out of an abundance of caution, **DOE is postponing all SSAB meetings through the end of April.**

We will continue to monitor the situation and provide updates as circumstances change.

Check our website, www.energy.gov/orssab for the latest information

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

Museum

(Continued from page 1)

Originally constructed in 1944, Building K-25 was the largest structure in the world with a 44-acre footprint and carried an equally immense and important mission to help end a global war by producing uranium for the world's first nuclear weapon.

Yet despite its size and urgent work, the public would not learn of its existence in Oak Ridge until the end of World War II.

Uranium enrichment operations ceased in 1985, and the site was permanently shut down in 1987. Afterward, DOE committed to and began a massive environmental cleanup effort to transform the site into a multi-use private sector industrial park for the community. That work is scheduled to be completed this year. DOE completed demolition of the K-25 building in 2013.

To ensure this site and its workers' vital roles in history are not forgotten, DOE worked with consulting and signatory parties, including ORSSAB, to select the best means to commemorate those roles. Consulting and signatory parties included the Advisory Council on Historic Preservation, the Atomic Heritage Foundation, the City of Oak Ridge, the Community Reuse



Displays at the new K-25 History Center include artifacts and depictions of life and work at the K-25 site.

Organization of East Tennessee (CROET), the National Park Service, the East Tennessee Preservation Alliance, the National Trust for Historic Preservation, the Oak Ridge Heritage and Preservation Association, and the Tennessee Historical Commission.

In addition to its role as a consulting party on the K-25 History Center, ORSSAB boards throughout the years provided extensive and detailed input into the project, with many of their

suggestions evidenced in the finished facility.

Located just south of the center of the site, on the second floor of the City of Oak Ridge fire station, the K-25 History Center boasts 7,500 square feet of exhibits offering visitors more than 250 original artifacts on display. Nearly 1,000 oral histories were collected over a span of ten years from former workers to develop the interactive galleries that highlight the historical significance and



DOE Under Secretary for Science Paul Dabbar (center) cuts the ribbon celebrating the official opening of the new K-25 History Center during the grand opening celebration and ribbon-cutting celebration on February 27. ORSSAB Secretary Bonnie Shoemaker, at left in red, also attended.



A timeline at the new K-25 History Center illustrates key global events and the K-25 site's unique roles in those events.

legacy of K-25.

Upon arrival, visitors will experience history and scientific innovation first-hand, from interacting with virtual tours of K-25's four floors, to mastering the science of nuclear chain reactions, to uncovering secrets behind the numerous artifacts on display. The K-25 History Center also hosts a Digital Memory Zone, giving former K-25 workers, their families and others the opportunity to leave their memories and oral histories of Oak Ridge.

The center officially opened to the public February 27 with a packed grand opening celebration and ribbon cutting ceremony. The event, hosted by OREM, featured remarks throughout the morning from several honorable guests including DOE Under Secretary for Science Paul Dabbar, OREM Manager Jay Mullis, UCOR President and Chief Executive Officer Ken Rueter, Oak Ridge Mayor Warren Gooch, and many former K-25 employees.

"I applaud the many agencies that helped us bring the K-25 History Center from an idea to an engaging facility that shares the incredible story of a secret city in Tennessee that changed the course of history," said Dabbar.

"The Department of Energy is proud to provide the Oak Ridge community a new educational attraction that preserves that story and highlights the men and women who built the world's largest building in 18 months and developed first-of-a-kind technology that helped

defend and power our nation."

The K-25 History Center is open seven days per week, and admission is free to visitors. Hours are 1-5 p.m. Sunday and Monday, 9 a.m.-5 p.m. Tuesday-Thursday and Saturday, and 9 a.m.-8 p.m. Friday.



Interactive displays at the K-25 History Center inform visitors about the work done at the K-25 site during World War II and the Cold War.

FY 2019 Annual Publications Detail Cleanup Successes, Progress

Several organizations involved in cleanup on the ORR recently released annual publications detailing their efforts on the OREM mission. They're a handy resource throughout the year and a way to catch up on a broad overview of current activities if you're just getting started.

Cleanup Progress is OREM's annual report to the community on the ORR cleanup effort. It's available at energy.gov/orem/about-us/news/cleanup-progress-reports.

UCOR, OREM's largest cleanup contractor, shares its *FY 2019 Annual Report*. It notes that as ETTP nears completion UCOR is transitioning



resources to cleanup at ORNL and Y-12. Read more at www.ucor.com/Newsroom.html#Pub.

The ORSSAB *2019 Annual Report* offers an overview of board activities for the year, from tours to topics heard and recommendations written. Find it at

energy.gov/orssab.

DOE EM headquarters published its *2019 Year in Review*, outlining cleanup achievements across the DOE complex. Oak Ridge was noted for construction progress for the Mercury Treatment Facility, investment in its workforce and new cleanup technologies, and ramping up ORNL and Y-12 cleanup

projects. Read more at www.energy.gov/em/mission/year-review.

For physical copies of any of these publications, please visit the DOE Information Center at 1 Science.gov Way, Oak Ridge, TN 37831.



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
ETTP – 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

As the United States responds to COVID-19 DOE is postponing all SSAB meetings through the end of April.

We will continue to monitor the situation and provide updates. Check our website for the latest information.

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