

# Annual Report 2018



Oak Ridge Site Specific Advisory Board  
[www.energy.gov/orssab](http://www.energy.gov/orssab)  
[orssab@orem.doe.gov](mailto:orssab@orem.doe.gov)

# Message from the Chair

---



*Dennis Wilson*

It is my pleasure as chair of the Oak Ridge Site Specific Advisory Board to present the board's 2018 Annual Report.

The board's mission is to provide independent advice and recommendations to the Department of Energy on its environmental cleanup program to remediate the Oak Ridge Reservation from hazardous and radioactive wastes leftover from the Manhattan Project and the Cold War era.

In 2018 the board built upon the momentum of the accomplishments of our previous year. With strong leadership from the Environmental Management and Stewardship Committee, it developed and submitted three recommendations to DOE. You'll find summaries of these key topics starting on page 11. They focused on protecting groundwater; the proposed Environmental Management Disposal Facility (EMDF); and budget priorities for cleanup projects.

Board members participated in both of the semiannual SSAB chairs' meetings: In the spring in Roswell, N.M., and in the fall in Alexandria, Va. Part of the work product from these meetings were two chairs' recommendations, one in response to an Energy Communities Alliance report on waste disposition and another related to building community engagement at SSAB sites.

The board also took part in a National Academies of Sciences conference about the role of technology in the Oak Ridge Office of Environmental Management (OREM) cleanup efforts; participated in public information meetings about the proposed EMDF; and toured the Waste Isolation Pilot Plant (WIPP) near Carlsbad, N.M. for the first time since 2012.

Through participation in national conferences such as the 2018 Waste Management Symposium in Phoenix, Ariz., the National Environmental Justice Conference in Washington, D.C., the National Cleanup Workshop in Washington, D.C., and the RadWaste Summit in Henderson, Nev., board members gained valuable insights into the environmental cleanup process.

The board experienced the retirement of four members this last year. The advancements made to the board's review process by previous leadership will continue to guide the timely review of the priorities of DOE's environmental management mission. The contribution of this year's new board members will be enhanced due to the process refinements as the board tackles DOE's 2019 priorities:

- Support for offsite groundwater monitoring across the Oak Ridge Reservation
- Excess facilities disposition at the Y-12 and Oak Ridge National Laboratory sites
- Ensuring future waste disposal capacity for future clean-up activities

I hope you find this report informative and helpful in your understanding of the board and its place in the decision-making process for DOE in its cleanup and stewardship responsibilities for the Oak Ridge Reservation. We always welcome input from members of the public on environmental management and stewardship activities on the Oak Ridge Reservation and offer a public comment period at each meeting. The board meets the second Wednesday of most months at 6 p.m. at the DOE Information Center, 1 Science.gov Way, Oak Ridge, Tenn.

Join us!

A handwritten signature in black ink that reads "Dennis Wilson". The signature is fluid and cursive, written in a professional style.

Dennis Wilson



*Updated aerial photos of East Tennessee Technology Park show progress made to remove unneeded facilities from the site and further the goal of turning most of the site into an industrial park.*

# Contents

Our Mission .....	1	Board Meetings .....	15
The Year's Top News.....	4	Other Activities .....	18
Key Issues .....	11	Members & Liaisons .....	21



# Our Mission

The Oak Ridge Site Specific Advisory Board (ORSSAB) is a federally appointed citizens' panel that provides independent recommendations to the Department of Energy's (DOE) Oak Ridge Environmental Management (OREM) Program.

The board provides advice to the DOE EM program regarding environmental restoration, waste management, long-term stewardship, land use, and economic development among other topics.

Recommendations regarding environmental justice, health and safety issues, historic preservation, and other concerns may also be developed at the request of the DOE assistant secretary for EM or the OREM manager. ORSSAB is one of eight site specific boards across the nation that comprise the EM SSAB and may also participate in joint recommendations with that organization.

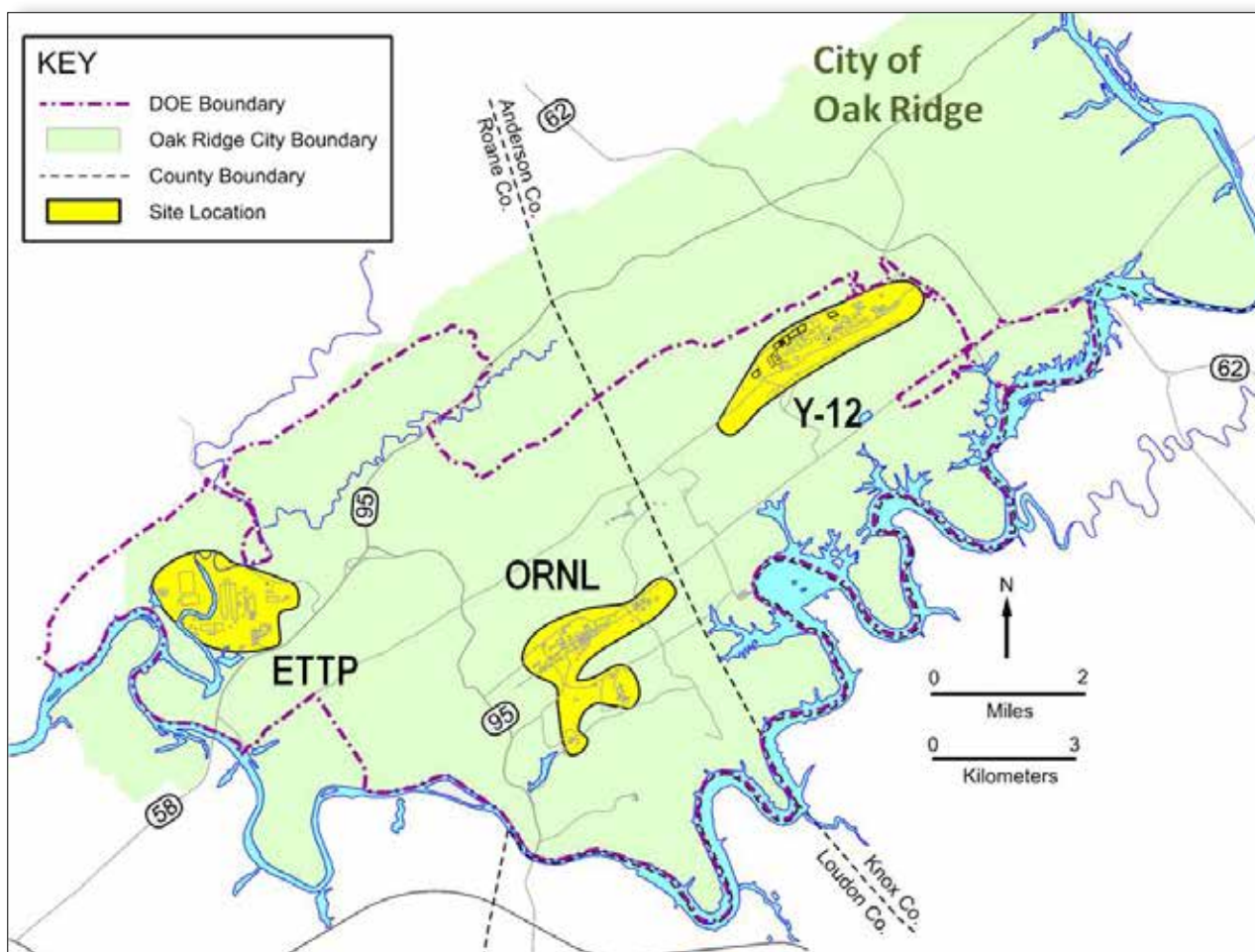
The board is committed to reflecting the concerns of the communities impacted by EM activities on the Oak Ridge

Reservation (ORR) and serving as a communications link between the public and relevant government agencies, including local governments.

ORSSAB provides a number of avenues for the public to learn about and express views on OREM's cleanup work. All board and committee meetings are open to the public and are announced in the Federal Register, newspaper advertisements, on our website, and various social media outlets.

Meetings are held at the DOE Information Center in Oak Ridge at 1 Science.gov Way, unless noted otherwise. The first hour of board meetings is filmed and broadcast on local cable TV stations and uploaded to YouTube at [www.youtube.com/user/ORSSAB](http://www.youtube.com/user/ORSSAB).

The board maintains a web site at [www.energy.gov/orssab](http://www.energy.gov/orssab). Information is also available by calling the ORSSAB support office at 865-241-4583 or 865-241-4584 or email us at [orssab@orem.doe.gov](mailto:orssab@orem.doe.gov).



Unlike most other DOE facilities, the ORR is almost entirely within the city limits of Oak Ridge. It contains three main facilities: East Tennessee Technology Park, Oak Ridge National Laboratory, and the Y-12 National Security Complex.

ORSSAB was chartered under the Federal Advisory Committee Act in 1995. The board is composed of up to 22 members, chosen to reflect a diversity of gender, race, occupations, views, and interests of persons living near the ORR. Members are appointed by DOE and serve without compensation. Members may serve up to three two-year terms.

At the close of 2018, the board consisted of 19 voting members from Anderson, Knox, Loudon, Morgan, and Roane counties. More about members who served can be found in the “Members” section starting on Page 21.

Non-voting participants include liaisons from DOE, the U.S. Environmental Protection Agency Region 4 (EPA), and the Tennessee Department of Environment and Conservation (TDEC), which advise the board on their agencies’ policies and views, as well as two high school student representatives.

### FY2018 Board Officers

ORSSAB officers for FY2018, which ended September 30, 2018, were Dennis Wilson, chair; Belinda Price, vice chair; and Richard Burroughs, secretary. Fred Swindler was chair of the EM & Stewardship Committee.

### Board Meetings

The board meets the second Wednesday of most months at 6 p.m. in Oak Ridge to hear presentations by EM per-

sonnel working on relevant projects, listen to and discuss input from concerned citizens, consider recommendations to DOE, and conduct other business. In August, an annual meeting is held to evaluate the board’s work during the year and plan activities for the next year.

The board conducts its deliberations under ORSSAB bylaws and Robert’s Rules of Order and strives to consider all relevant positions in reaching decisions.

### Committees

General board business is handled at the monthly Executive Committee meeting, which is composed of the elected officers of the board and the chair of the EM & Stewardship Committee. This committee holds general administrative authority to set board agendas, coordinate the work of other committees, and transact business as necessary.

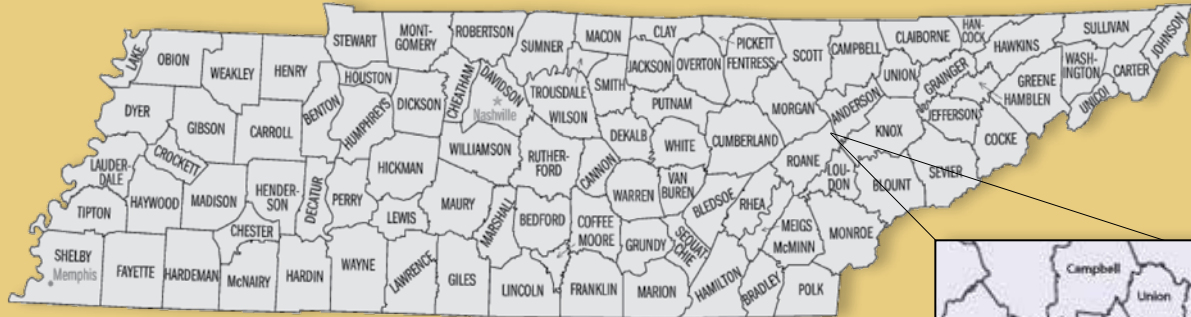
The EM & Stewardship Committee is responsible for monitoring the major cleanup activities on the ORR as well as stewardship requirements for areas of the reservation that have been remediated, but remain contaminated long-term. It originates recommendations to be considered at full board meetings. All board members are part of this committee.

Committees usually meet monthly, and all meetings are open to the public.



The FY2018 Oak Ridge Site Specific Advisory Board

# REPRESENTING NINE COUNTIES IN EAST TENNESSEE



## Board members from each county at the close of 2018:

Anderson - 6	Loudon - 2
Knox - 6	Roane - 4
Morgan - 1	

## Join the Board

A broad spectrum of backgrounds and viewpoints is desired for board membership; technical expertise is not required. Applications for membership are accepted at any time and are actively solicited through a variety of media during specific recruitment periods.

Residents from the counties affected by DOE operations are encouraged to apply. These counties include Anderson, Blount, Campbell, Knox, Loudon, Meigs, Morgan, Roane, and Union.

Applications may be obtained by emailing the ORSSAB support offices at [orssab@orem.doe.gov](mailto:orssab@orem.doe.gov) or visiting our webpage at [www.energy.gov/orssab](http://www.energy.gov/orssab).

## Abbreviations

CAB	Citizens Advisory Board	ORNL	Oak Ridge National Laboratory
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	ORR	Oak Ridge Reservation
DDFO	Deputy Designated Federal Officer	ORSSAB	Oak Ridge Site Specific Advisory Board
DOE	U.S. Department of Energy	TDEC	Tennessee Department of Environment and Conservation
EM	Environmental Management	TRU	Transuranic
EMDF	Environmental Management Disposal Facility	TWPC	Transuranic Waste Processing Center
EMWMF	Environmental Management Waste Management Facility	WIPP	Waste Isolation Pilot Plant
EPA	U.S. Environmental Protection Agency	Y-12	Y-12 National Security Complex
ETTP	East Tennessee Technology Park		
OREM	Oak Ridge Office of Environmental Management		



# The Year's Top News



*UCOR completed demolition of the TSCA Incinerator ahead of schedule and under budget in September.*

## Sun Sets on Unique Facility

EM workers at the East Tennessee Technology Park (ETTP) completed demolition of the Toxic Substances Control Act (TSCA) Incinerator, moving a step closer to transitioning the former gaseous diffusion complex into a private sector industrial park. Workers safely completed the project under budget and three months ahead of schedule.

The incinerator was named after a law passed in 1976 that addressed the production, use, and disposal of specific chemicals and was the only one in the U.S. capable of burning radioactive waste containing polychlorinated biphenyls (PCBs). This capability played an important part in cleanup operations on the Oak Ridge Reservation and at other sites.

The TSCA Incinerator ceased operations in December 2009 after treating more than 35 million pounds of liquid and solid waste from more than 20 DOE sites around the country. In the years after, employees began cleaning the TSCA Incinerator to place it in safe shutdown, which was achieved in 2013.

*The TSCA Incinerator in 2009.*



# AMSE Moves to New Home

In October, government officials and local residents opened the doors to the new home for the American Museum of Science and Energy (AMSE), which explores Oak Ridge's legacy in environmental cleanup, scientific and technical innovation, and national security since the Secret City's start in the Manhattan Project 75 years ago.

Established in 1949, the museum provides educational programs focused on DOE's past, present, and future missions. It also offers interactive curriculum-based education programs for school groups and the general public, hosts events and rotating exhibits, and provides live demonstrations.

The new 18,000-square-foot facility has five main galleries named the Manhattan Project, National Security, Big Science, Energy Leadership, and Environmental Restoration — all reflecting Oak Ridge's history, innovation, and work. The building also boasts new interactive exhibits, hands-on activities, a lecture hall, and classroom facilities.

*Counterclockwise from top: Children examine personal protective gear in the EM section of the museum. A selection of photographer Ed Wescott's historic images of Oak Ridge are also on display. Participants in the Oct. 18 opening of the new American Museum of Science and Energy facility gather for the ribbon cutting.*





**DOE awards environmental sampling contract to explore preferred disposal facility site**



*Workers sample soil on the Oak Ridge Reservation.*

DOE OREM awarded Strata-G LLC a contract to perform environmental sampling in support of efforts to construct additional onsite disposal capacity on the Oak Ridge Reservation (ORR).

Under the contract, valued at approximately \$1 million, the veteran-owned small business is responsible for drilling 16 wells to access groundwater, characterize surface water, and gather soil samples for geotechnical investigations at the Bear Creek Valley site, located on federal land west of the Y-12 National Security Complex.

Information gathered from these activities will be used to determine if the site is suited for future waste disposal operations and support detailed design for the new disposal facility, known as the Environmental Management Disposal Facility (EMDF).

OREM has extensive environmental data from years of research, sampling, and surveys in the Bear Creek Valley. Knowledge about the larger area led the agency to identify the Bear Creek Valley site as a potential location for the Environmental Management Disposal Facility; however, this sampling effort will provide the first site-specific samples focused exclusively on this particular area.

**DOE begins demolition of Central Neutralization Facility at ETPP**

Crews began demolishing the Central Neutralization Facility at ETPP in February.

Constructed in the mid-1980s to treat wastewater from operations at the former uranium enrichment complex, the facility consists of tanks, trailers, and other treatment systems used to filter and remove radioactive materials, metals, and suspended solids from wastewater at the site.

All operations at the facility ceased in 2013, and a new wastewater treatment facility, the Chromium Waste Treatment System, began operating on the same footprint.

Workers deactivated the facility by disabling utilities and cutting tie lines, which are the pipes that transported enriched uranium between the site’s facilities. During previous closure activities, crews removed materials containing radiological, metal, and organic contamination. Workers thoroughly rinsed and sampled remaining process tanks, pipes, and equipment.



*Crews deactivate the Central Neutralization Facility by disabling utilities and cutting tie lines.*

**DOE Tears Down Two Higher-Risk Buildings**

OREM eliminated two buildings from DOE’s list of higher-risk excess contaminated facilities.

The projects were part of DOE’s Excess Contaminated Facilities Initiative, an effort to stabilize facilities, reduce risks, and in some cases accelerate demolition schedules. Oak Ridge is of particular interest since the site houses 297 “excess” facilities— facilities that are no longer operational or serving the Department’s missions.

*(Continued on page 7)*





*Crews take down Building 9743-2 at Y-12 National Security Complex.*

As of December 2016, Oak Ridge contained 60 of DOE's inventory of 203 higher-risk excess facilities.

Both buildings, the Radiation Source Building and another used for biological research, were part of the Y-12 National Security Complex (Y-12) Biology Complex. The buildings, which are owned by the Office of Science at a National Nuclear Security Administration site, have been vacant since 2000, and they are deteriorated due to their age. Additionally, the location can be used for modern national defense missions.

Originally constructed to recover uranium from process streams, the complex later housed DOE's research on the genetic effects of radiation from the late 1940s. When operational, the facilities once housed more individuals with doctorates than anywhere in the world. These men and women radically enhanced the world's knowledge in biology, including the discovery of the Y chromosome.

The Biology Complex previously consisted of 11 buildings until OREM demolished four of them in 2010 as part of the American Recovery and Reinvestment Act. With last week's activities now only six remain. The goal is to complete demolition in the early 2020s.

## April

### **Oak Ridge Prepares Final Legacy Transuranic Waste Containers for Disposal**

DOE OREM completed installing vents and sample ports in the final drums of legacy transuranic waste stored at the Oak Ridge National Laboratory (ORNL). This decade-long

effort ensures the drums do not contain any hazardous gases that could cause rapid combustion.

The closed, explosion-proof, high-efficiency particulate air-ventilated unit where the drums were vented was capable of withstanding a combustion event while keeping workers and the nation's largest multi-program national laboratory safe.

After crews process the drums at the Transuranic Waste Processing Center (TWPC), they will eventually be transported to WIPP near Carlsbad, N.M., for final disposal.



*An aerial view of the Transuranic Waste Processing Center in Oak Ridge, where the final drums of legacy transuranic waste stored at Oak Ridge National Laboratory will be processed before shipment to the Waste Isolation Pilot Plant for permanent disposal.*

### **More than 4 Miles of Piping at Removed at ETPP**

DOE OREM and its cleanup contractor URS|CH2M Oak Ridge (UCOR) finished removing more than 25,000 feet of piping at ETPP that once transported uranium through a series of buildings during the enrichment process.

UCOR was tasked with removing more than 4.5 miles of the piping, called tie lines, which ranged in diameter from 1 to 20 inches.

The tie lines once sprawled across the site and connected all five former gaseous diffusion uranium enrichment buildings. The last of these massive buildings was demolished in 2016. Oak Ridge became the first site to successfully remove all of its gaseous diffusion enrichment

*(Continued on page 8)*



buildings after workers demolished five facilities totaling 4.5 million square feet.

The final portion of this piping was removed in an area known as Poplar Creek at ETTP. Last summer, OREM started projects to eliminate the 11 buildings, support facilities, and associated infrastructure in this area. OREM anticipates completing that work by early 2019.

## May

### Crews Complete Demolition of Central Neutralization Facility

Workers finished demolition of the ETTP Central Neutralization Facility, which once treated the site's industrial wastewater.

EM and Oak Ridge Reservation cleanup contractor UCOR wrapped up the project five weeks ahead of schedule. Crews had started demolition of the structures that comprised the facility in early January.

Constructed in the mid-1980s to treat wastewater from operations at the former uranium enrichment complex, the facility consisted of tanks, trailers, and other treatment systems used to filter and remove radioactive materials, metals, and suspended solids from wastewater at the site.

All operations at the facility ceased in 2013, and a new wastewater treatment facility, the Chromium Waste Treatment System, began operating in its place.



The Central Neutralization Facility is shown before demolition began in January 2018 (top) and after demolition was completed in May.



## June

### Assistant Secretary White Visits Oak Ridge

EM Assistant Secretary Anne White visited the Oak Ridge Office of Environmental Management (OREM) for the first time in her current role.



EM Assistant Secretary Anne White, second row, third from left, met OREM early career professionals during her site visit.

Throughout her visit, White focused on the most important element of EM's mission – its people. She started the day with OREM's senior management team. Later, she attended lunch with early career professionals, where attendees shared their perspectives on topics ranging from EM's culture to human capital planning and contract reporting requirements. During a tour, White met the employees responsible for recent project successes and for positioning OREM to achieve major cleanup advances on the horizon.

### Workers Demolish Building K-633

Oak Ridge's EM program and its cleanup contractor UCOR completed demolition of the K-633 Test Loop Facility. This project eliminates one of the most contaminated remaining buildings at ETTP. Crews began taking down the structure in early May, and they finished removing debris June 14.

Building K-633 was the fourth building Oak Ridge's EM program has removed from ETTP's Poplar Creek area since last year. Prior to those teardowns, this area contained



Crews began tearing down Building K-633 in May and completed the project in June.

*(Continued on page 9)*

11 large buildings and numerous structures built in the 1940s and 1950s to support the site's former nuclear program and operations. The Poplar Creek area contains the most contaminated facilities left at the site, following the demolition of five massive gaseous diffusion uranium enrichment buildings.

The building consisted of four separate and independent testing loops. The first three loops were built to test and evaluate gaseous diffusion equipment performance under production conditions. The final loop was installed in 1981 to evaluate prototype equipment designed for gas centrifuge enrichment. DOE ultimately shut down the 18,100-square-foot facility in 1984.

All of the debris has already been removed from the demolition project. The radiological contaminants in the building were affixed inside piping and equipment using fixatives and foam, allowing for safe demolition of the structure.

## July

### Vacuum Enables Oak Ridge Crews to Remove Contaminated Sludge, Debris

EM began removing contaminated sludge and debris from tanks, sumps, and valve boxes at ORNL's liquid and gaseous waste operations using a powerful, new trailer-mounted vacuum.

The equipment has already enhanced safety and operational efficiency. Without the vacuum, personnel would be required to fully dress in personal protective equipment and remove the sludge and debris with shovels and buckets. In addition to being closer to contaminated materials in confined spaces, workers would face an increased chance of slips and falls while climbing in and out of slippery areas in the protective suits.



EM now has a powerful, trailer-mounted vacuum for cleaning and maintaining the important liquid and gaseous waste operations at Oak Ridge National Laboratory.

Using the vacuum technology eliminates the risk of heat stress for employees, who would otherwise perform manual labor in protective suits during the hot Tennessee summer.

The disposition of accumulated sludge and debris is important to maintain liquid and gaseous waste operations at ORNL. The waste treatment facilities are essential to ongoing operations of the nation's largest multi-program national laboratory.

## August

### OR Transuranic Waste Processing Center Receives Top DOE Safety Award



Employees from the Oak Ridge Office of Environmental Management and North Wind Solutions hold a flag that will hang at the Transuranic Waste Processing Center.

Employees at Oak Ridge's TWPC received the DOE Voluntary Protection Program's (VPP) distinguished Superior Star Award on Aug. 30. Earlier in the month, employees at the site had celebrated completing a year of safe shipments to EM's WIPP.

TWPC is operated by EM contractor North Wind Solutions. Contractors whose programs meet the highest requirements for outstanding safety and health programs receive recognition from the VPP safety program. A VPP Star site of nine years, TWPC consistently meets safety and health goals and has an injury and illness rate significantly below the average of similar entities.

## September

### SafetyFest Draws 1,200 Participants from 23 States

More than 1,200 people from 23 states attended the 2018 SafetyFest Tennessee in Oak Ridge to gain valuable safety training they can apply at work and home.

*(Continued on page 10)*



DOE, along with more than 55 business partners and sponsors, offered more than 100 free classes and participated in a roundtable discussion on a range of safety-related topics during the weeklong training event

Participants traveled from as far away as Utah and New Mexico to attend the classes, which spanned a spectrum of safety and health issues, such as fire safety, injury prevention, first aid, and ladder safety.

## October

### Oak Ridge Prepares Former Uranium Enrichment Area for Industrial Use

Workers began pulling up the foundation slab of the former K-29 gaseous diffusion uranium enrichment building, opening a large area of land that the OREM is set to transfer to the community for industrial redevelopment.

The 291,000-square-foot K-29 Building was the first of the five massive gaseous diffusion buildings to be taken down at ETTP. These buildings were built in the 1940s and 1950s to enrich uranium for defense and commercial purposes until the plant shut down in the mid-1980s.

After OREM completed the K-29 demolition in 2006, the slab was paved with asphalt, and trailers were placed there to house cleanup personnel and project teams.

Crews have already removed raised walkways, and now they are working to remove the retaining walls, asphalt, and concrete slab, which is expected to be complete in 2019.



Once crews finish removing the K-29 Building foundation slab in 2019, the Oak Ridge Office of EM will be set to transfer the area for industrial redevelopment.

## November

### West COLEX Demolition Completed at Y-12

DOE and cleanup contractor UCOR completed demolition of the West Column Exchange (COLEX) equipment at Y-12, reducing the threat of mercury releases into the environment, removing a significant structural risk, and clearing the way for future demolitions.



Last used in the 1960s, the mercury-contaminated West Column Exchange equipment became rusted and structurally degraded over the years.

The mercury-contaminated COLEX equipment was 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 mercury was lost into the equipment, buildings, and surrounding soils, and its cleanup is one of EM's top priorities.

During the 18-month project, crews recovered nearly 6,500 pounds of mercury from the rusted and structurally degraded equipment. The teams also completed asbestos abatement; drained and removed more than 10,000 feet of mercury-contaminated piping; and removed tanks, condensers, heat exchangers, and a 1.6-million-pound mezzanine structure.

## December

### Wilkerson Named as OREM Cleanup Deputy

DOE this month named Laura Wilkerson as the deputy manager of OREM. OREM is responsible for environmental cleanup across the 32,400-acre Oak Ridge Reservation.

Specifically, Wilkerson will oversee the daily operations needed to perform environmental cleanup and stewardship, decontamination and decommissioning activities, waste processing and management, surveillance and maintenance programs, and procurement and contract functions.

In her previous role, she oversaw all planning and execution activities related to the cleanup at Oak Ridge's three primary sites—ETTP, Y-12, and ORNL.

She brings more than 25 years of federal service to the position.



Laura Wilkerson

# Key Issues

Over the past year, the board sent two locally generated recommendations to DOE. In addition it endorsed two recommendations developed by the chairs of the eight site specific advisory boards on supplemental environmental projects.

Full text of the recommendations and responses is available on the ORSSAB website at [energy.gov/orem/listings/orssab-recommendations-responses](https://energy.gov/orem/listings/orssab-recommendations-responses).

## Recommendations on the Proposed Environmental Management Disposal Facility

Much of the Manhattan Project legacy waste for which OREM is responsible falls under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, which is a federal law regulating the cleanup of designated sites contaminated with hazardous waste.

CERCLA wastes from cleanup activities at ETTP, ORNL, and Y-12 are in large part disposed of in an existing landfill known as the Environmental Management Waste Management Facility (EMWMF) near Y-12. EMWMF has been actively accepting ORR CERCLA waste since 2002, but its capacity to accept waste will be exhausted in the mid-2020s. Development of a new disposal area, named the Environmental Management Disposal Facility (EMDF), has been proposed by DOE to regulators.

### Recommendations

ORSSAB supports onsite disposal of OREM CERCLA wastes that meet the onsite waste acceptance criteria. We wish to provide recommendations that have become relevant given the revisions of the remedial investigation/feasibility study and evolving discussions among DOE, TDEC, and EPA. In sum, our recommendations are as follows:

1. **Funding:** Ensure that funding is secured and prioritized to provide a reasonable period of overlap no less than two years operation of the proposed EMDF and the existing EMWMF given the fact that the EMWMF is currently at 75 percent capacity.
2. **Community Engagement:** Although communication with and to the community is part of the CERCLA process, emphasis should be placed on direct and iterative contact with the residential communities that are near the proposed EMDF site. Ideally, this should involve scheduled informational meetings with adjacent communities to ensure visibility regarding proposed plans, while allowing residents the opportunity to learn about the plans, and have their

voice heard regarding their concerns. We recommend these meetings include the planning and status of the design and construction efforts and final timelines for completion of each critical phase. These informational meetings should be scheduled to take place as early as possible in the planning stages to adequately address community/public concerns and that meetings are scheduled in sufficient numbers, times and places to allow all interested parties to attend.

3. **Expansion/Additional Capacity:** During the preparation of the Proposed Plan, the ROD and the conceptual and design phases of the EMDF, DOE should evaluate and ensure that the facility will allow for an additional capacity in case that the original capacity is not adequate.
4. **Monitoring:** Actual hydrologic conditions in the proximity of the proposed site for EMDF should be evaluated to mitigate or eliminate any deleterious effects later during construction and operation. Additionally, the evaluation process should include specific lessons learned from the current facility and results from on-going site investigation/sampling. The evaluation process should be completed before the design phase is finalized.
5. **Budget for Future Monitoring and Maintenance of the Completed Facility:** Funding should be allocated and prioritized for the post-construction phase that includes future monitoring and functioning of the facility for requirements stipulated in the ROD and other relevant documents.
6. **Seek a mechanism for either DOE or a public-private partnership** that would be responsible for the lifetime of the EMDF to provide scheduled periodic maintenance to avoid deterioration of the facility once the facility is at capacity.
7. **Devise a monitoring and maintenance plan** prior to closure of EMDF.



## Recommendations on FY2020 OREM Budget

Each year the U.S. Department of Energy (DOE) Environmental Management (EM) Program develops its budget request for the fiscal year two years beyond the current fiscal year (FY), incorporating budget requests from DOE field offices to develop the EM Program budget request to the president.

On May 9, 2018, the Oak Ridge Environmental Management (OREM) program held its annual Community Budget Workshop to discuss the FY 2020 budget formulation process and provide the EM portfolio project directors with an opportunity to talk about priorities for their projects. The workshop provided content and discussions that the Oak Ridge Site Specific Advisory Board (ORSSAB) used to draft its recommendations. ORSSAB focused on general near-term and long-term cleanup priorities identified at the Community Budget Workshop:

- **Complete ETTP cleanup** including all demolition and remedial action consistent with CERCLA agreements and implement reindustrialization and historic preservation activities;
- **Disposition ORNL uranium-233** including uranium-233 direct disposition, downblending operations, and disposal of remaining inventory;
- **Disposition ORNL transuranic waste** including disposition of transuranic debris waste and start building the Sludge Processing Facility;
- **Address Y-12 mercury contamination** including proper planning for future mercury cleanup, a reduction of mercury in surface water exiting Y-12, and begin addressing mercury-contaminated buildings.

### Recommendations

ORSSAB supports OREM's Program Plan and recommends fully funding the activities that are currently supported for FY 2020. In addition, ORSSAB has identified three priorities for cleanup and recommends that the FY 2020 budget request reflect adequate funding to keep these projects going. Also, when additional funds from suitable



*A view of the Outfall 200 area, where the headwaters originate for the Upper East Fork Poplar Creek.*

plus-ups and savings become available, we recommend that these funds be targeted for these projects:

1. **Complete a groundwater model** that would be usable and agreeable by all parties, within the 2020 Vision for ETTP.
2. **Complete technology selection** and commence implementation phase for treatment of contaminated underground/ groundwater plume under the footprint of building K-1401 at ETTP if feasible within the 2020 Vision.
3. **Complete sampling, evaluation and report findings** on groundwater contamination at the southwest side of ORNL bordering the Clinch River.



*Historic preservation activities at the former K-25 site were among the OREM budget priorities discussed for FY 2020.*

## Recommendation Regarding the Energy Communities Alliance Report on Waste Disposition



*The ECA Report sets forth policy changes to advance desirable and widely-accepted goals of cleaning up nuclear wastes nationally.*

In 2017 the Energy Communities Alliance (ECA) sponsored the wide-ranging report “Waste Management: A New Approach to DOE’s Waste Management Must be Pursued” (available at [www.energyca.org/publications](http://www.energyca.org/publications)) These recommendations would, if implemented, bring about major changes in long-standing national policies regulating the categorization, treatment, and disposition of DOE legacy radioactive waste.

The environmental management of such wastes would henceforth be based, not on origin, but on the radioactive characteristics of the waste and the resulting risks to human health and to the environment.

However, while the report presents a coherent and consistent argument on behalf of a new approach, it would be difficult to determine the merits based on this policy study alone. On the whole, the merits of the new approach are asserted but not really evaluated or empirically justified.

The ECA Report sets forth policy changes to advance desirable and widely-accepted goals of cleaning up nuclear wastes nationally. But given the empirical shortcomings, the report should be regarded, at this juncture, as a worthwhile, but preliminary policy study. A pro or con recommendation on the merits of the proposal is not possible at this time. More information is needed.

## Recommendation

1. **Undertake a comprehensive analysis** of the ECA report, including technical, financial, environmental, safety, transportation, and other implications of implementing its recommendations. This is for the purpose of evaluating the impact of such changes.
2. **Evaluate the site-specific impact** of implementing the recommended changes including both potential risks and benefits.
3. **Address, at a minimum, the questions** developed by the Chairs set forth in the attachment.
4. **Provide a time line** for performing the analysis and brief its results on an ongoing basis to the Chairs and their respective SSABs for input.

A complete copy of the draft recommendation and the ECA report is available on the ORSSAB website.





ORSSAB was one of the SSABs at the Fall Chairs' Meeting in October to jointly endorse the following item. More information about the other boards organized under the EMSSAB umbrella can be found at [energy.gov/emssab](http://energy.gov/emssab).

## Recommendations on SSAB Involvement in Enhancing Stakeholder/Public Engagement

The EMSSAB believes that successful completion of DOE's cleanup mission must include community, public, and stakeholder education and engagement.

EMSSAB recommends that the individual site managers and advisory boards work together to determine what activities best suit their situation and respond to public needs.

The recommendation further noted that individual site-specific advisory boards are in the perfect position to help develop and recommend implementation strategies on each of the offered activities.

Board members, recognizing the variety of sites and different cleanup schedules, offered several potential activities that could fulfill each item in the recommendation.

- **Determine the additional needs for public information exchange and opportunities for engagement.**

This could be accomplished through a Community Analysis or previously collected data from public meeting attendance, outreach efforts, etc. To determine the level of public interest, these activities may include far-reaching individual regional community analysis; polling selected public interest groups; polling advisory board members, etc.

Advisory Board members could provide specific recommendations to the site manager related to improving outreach efforts.

- **Prepare a handout of the site's information resources.**

This should include videos, speakers, topics, websites, tour information, etc. Send it to each applicable Chamber of Commerce with a request to further provide to local civic and service organizations, as well as community institutions like churches, senior centers and libraries.

- **Develop a virtual reality tour.**

Include clear, in-depth information that will help the public understand the depth and breadth of cleanup decisions and activities.

- **Enhance educational outreach.**

Develop a site-specific educational exhibit with handouts and educational tools to assist educators of all grade levels to discuss the history and legacy of the site.

Coordinate with local and regional school districts and relevant college departments to develop a relationship and inform them about educational resources and offer a site tour.

- **Develop displays in public libraries that provide in-depth information.**

These could be 3-D or otherwise and cover one or more site subjects, such as upcoming cleanup decisions soliciting public comment, site successes/challenges, transportation routes, and identifying websites for more info, etc. These should be updated frequently.



*A permanent exhibit at the American Museum of Science and Energy in Oak Ridge details the history of ORSSAB and its members' role in OREM's cleanup mission.*

# Board Meetings

## January

The board did not meet in January.

## February

DOE's Brian Henry and Bill McMillan attended ORSSAB's February meeting to discuss risk reduction in excess facilities at Y-12 and ORNL, respectively.

Henry told members that DOE has more than 1,600 excess facilities across the DOE complex, with more than a quarter of those on the ORR.

Henry and McMillan discussed specific buildings that DOE plans to address, including Alpha 4, the Biology Complex, and former hot cell facilities, among others.

## March

The board did not meet in March.

## April



*The current facility for low-level radioactive waste, the EMWMF, shown above, is currently 75 percent full.*

Brian Henry returned in April to talk about landfill operations and waste disposal capacity on the ORR. He said that the ORR has a suite of landfills that support all of OREM's cleanup programs.

Henry said some of the landfills on the ORR can only accept 'clean' waste such as construction debris, while others can accept classified or low-level contaminated waste. Waste that exceeds the acceptance criteria for those landfills are shipped offsite for disposal.

The current facility for low level radioactive waste, the Environmental Management Waste Disposal Management Facility (EMWMF) is currently 75 percent full, according

to Henry, and there are still decades worth of cleanup work ahead for the ORR. Henry said for the cleanup program to be successful, OREM needs new low level radioactive waste capacity at the planned Environmental Management Disposal Facility (EMDF) operational before EMWMF reaches capacity.

## May



*From left, ORSSAB 2018 Chair Dennis Wilson, Ed Trujillo and Leon Shields attend the 2018 Community Budget Workshop.*

The board did not meet in May. Instead, ORSSAB members were encouraged to attend the annual public workshop on the proposed OREM FY 2019 budget request to DOE EM Headquarters. (See [page 12](#) for the recommendation that was developed on this topic.)

## June

Brian Henry returned in June to talk about the Outfall 200 Mercury Treatment Facility (MTF) planned for Y-12. He said key goals for MTF include reducing mercury in groundwater leaving the Y-12 plant, initially to a level below 200 parts per trillion (ppt) and in the long term to levels below 50 ppt.

Additionally, MTF will serve as a line of defense against additional mercury discharges caused by demolition of contaminated buildings.

Henry said DOE expects the facility to be operational by 2024 or earlier, depending on funding.

## July

The board did not meet in July, however, five new members of the board began their training and participated in a tour of Oak Ridge cleanup projects.



## August



From left, Bill Clark, Fred Swindler, Belinda Price and Dennis Wilson attend the 2018 ORSSAB Annual Planning Meeting in Gatlinburg.

Board members and liaisons traveled to Gatlinburg, Tenn., to the Black Bear Inn & Suites for the board's annual meeting. Attendees also included the board's five new members for the year.

Liaisons from DOE, EPA and TDEC offered their respective agencies' suggested topics for the board to consider in its annual workplan.

OREM leadership gave a detailed overview of OREM's long-term and near-term goals, the local cleanup budget and the recommendation process.

Connie Jones, the board's liaison from EPA, gave an overview of ongoing groundwater discussions among the agencies and reiterated that groundwater restoration and protection are the EPA's priorities during and after cleanup of the ORR.

Michael Higgins, the board's liaison from TDEC, shared six topics his agency would like addressed: future waste disposal, processing and disposition of TRU waste, assessment of groundwater, mercury remediation, water management and the Molten Salt Reactor Experiment.

## September

Board members held their annual dinner meeting in September at Kume Japanese Cuisine in Oak Ridge. DOE's Steve Cooke joined to discuss "Vision 2020: Planning for the Future of ETTP Including Reuse, Historic Preservation and Stewardship."

Cooke said that at one time, the future of ETTP was just about reindustrialization. Now, he said, it is increasingly about a multi-use space that provides jobs, preserves history and protects greenspace.

He told members that "a huge footprint at ETTP had been demolished," and most of the soil remediation had been completed in Zone 1 and work continued in Zone 2, where the main focus was soil and slab removal at the former K-25 building.

A significant amount of soil removal is ongoing and the work that remains to be done at ETTP is to tear down a number of buildings, including the centrifuge test facilities.



Vision 2016, Vision 2020 is DOE's long-term cleanup goal for ETTP. This aerial photo from 2018 shows major progress at the site.

## October



Terry Allen



Bill Clark



Sarah Eastburn



Marité Pérez



Brooke Pitchers

At the first meeting of the new fiscal year, Alternate DDFO Melyssa Noe presented plaques to outgoing members Christopher Beatty and Venita Thomas in recognition of their service, and she also introduced new members: Terry Allen, Bill Clark, Sarah Eastburn, Brooke Pitchers and Marite Perez.

Ben Williams, DOE public affairs officer, was on hand to discuss the various ways DOE communicates its progress and plans for cleanup on the Oak Ridge Reservation to stakeholders.

He stressed the importance of timely communications to the success of the cleanup mission's future success and noted that OREM must juggle the needs of the public, employees, local and state officials, as well as federal decision-makers at DOE headquarters and in Congress.

## Online



## In Print



OREM's outreach efforts cover a variety of methods, from direct outreach in person or on social media to working with members of area news outlets or colleagues throughout the DOE complex.

Williams said DOE uses all these outreach efforts to communicate four major messages:

- Oak Ridge is investment-worthy
- Vision 2020 is within reach
- Preparation is underway for cleanup at ORNL and Y-12
- Additional waste disposal capacity is needed for the future of the cleanup program.

## November

Brian Henry returned in November to discuss DOE's ongoing efforts to assure waste disposal capacity for the cleanup mission in Oak Ridge.

Henry gave an overview of the ORR facilities: ETTP, ORNL and Y-12, and the current waste disposal facilities servicing these sites. He followed this with a discussion of DOE's plans for a new waste disposal facility, EMDF. He told board members that DOE had released a proposed plan for EMDF in September and discussed a DOE's progress on EMDF.

Henry said studies had been completed at DOE's preferred site to inform facility design, monitoring wells had been installed and soil sampling and other tests had been conducted. He said a second phase of studies is ongoing to use in the design and to analyze infrastructure and transportation needs.

## December

The board did not meet in December.

## Looking Ahead: 2019 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 at the DOE Information Center, 1 Science.gov Way, Oak Ridge. Changes to the schedule will be noted on our website, social media and other advertisements.

In-depth discussion follows in the EM & Stewardship Committee meeting on the fourth Wednesday of most months, which also takes place at the information center.

If a recommendation is deemed appropriate, initial research will be performed by members of an issue group focused on the topic. The draft document will then be produced by the EM&Stewardship Committee before being sent to a full board vote.

### February

DOE representatives will present an Evaluation of Ongoing Groundwater Protection and Remediation Efforts.

### March

DOE representatives will discuss Aquatic Ecology Research and Technology Development in East Fork Poplar Creek.

### April

DOE representatives will discuss Extending Operational Life of Facilities & Reducing Surveillance and Maintenance Requirements.

### May

The board will not officially meet in May. Instead, members and the public are encouraged to attend the DOE Community Budget Workshop.

### June

DOE representatives will update the board on Excess Contaminated Facilities.

### July

There will be no meeting in July. New board members will participate in training with board staff and DOE's liaisons.

### August

The board will hold its annual planning meeting at an offsite location to be announced. It will hear from agency liaisons on suggested topics and discuss its workplan topics.

### September

DOE representatives will seek input on Reuse and Historic Preservation Efforts at East Tennessee Technology Park.



# Other Activities



*Tours of the ORR were organized this year for the board's five new members and two new student representatives. Attending the July tour were (L-R) Brooke Pitchers, Terry Allen, Jasleen Narula, Sarah Eastburn, Marite Perez and Bill Clark*

## Understanding the Mission

ORSSAB members are expected to actively educate themselves about OREM's projects at Oak Ridge facilities.

One of the first activities for all new members is a comprehensive tour of the ORR. A guide, usually one of the board's designated federal officers, explains the impact of previously completed projects, gives an overview of current work, and an outline of where future remediation activities will take place.

Likewise, current board members regularly tour areas relevant to the board's mission of providing advice to DOE in its cleanup mission. They also represent ORSSAB at related events such as the announcement of new projects or completion celebrations.

*Chair Dennis Wilson represented ORSSAB at a meeting of the National Academies of Sciences.*





*ORSSAB Chair Dennis Wilson, left, speaks with EM Assistant Secretary Anne White during the 2018 Fall Chairs' Meeting in Alexandria, Va. The meeting, attended by Wilson and 2018 Vice Chair Belinda Price, marked the first SSAB All Chairs Meeting held jointly with EMAB.*

## Working Better Together

Oak Ridge's SSAB is not alone in its mission. An umbrella organization, the EM SSAB, links Oak Ridge with boards at eight other DOE cleanup sites around the country.

Each board regularly hosts events designed to let the boards collaborate on recommendations, share best practices, hear updates from DOE headquarters officials and understand the unique challenges faced by the other sites.

*ORSSAB members toured DOE's Waste Isolation Pilot Plant (WIPP) in Carlsbad, N.M. in conjunction with the SSAB Spring Chairs' Meeting held in May in Roswell, N.M.*







*From left, ORSSAB member John Tapp, Brooke Pitchers, Sarah Eastburn, Michelle Lohmann, Terry Allen and DOE's Brian Henry join other members at Y-12's New Hope Visitor Center to begin a tour of DOE's Environmental Management Waste Management Facility in November.*

## Making Progress

On tours this year board members were able to see firsthand some of the risk-reduction and stabilization work completed with a \$45-million funding plus-up in FY17 earmarked for excess contaminated facilities.

Board members observed work being done at Alpha 4 at Y-12 and examined future work scope on the Biology Complex and related equipment. At ORNL, the group visited "isotope row," a district of non-operational hot cell facilities on the central campus, and also examined Building 7500 to learn about completed and planned remedial actions.

Members explored how OREM handles waste management with a visit to disposal sites and discussed potential future waste disposal options.

# Members & Liaisons



*Terry Allen*

Terry Allen is a retired general engineer who worked for OREM until December 2016. At OREM, he worked on issues related to regulatory compliance, safety culture, and a variety of other tasks related to environmental cleanup at the site. Before that he worked for Martin Marietta Energy Systems in various capacities, and for 13 years he was with TVA. Terry received a B.S. in Chemical Engineering and an M.S. in Environmental Engineering from UT. Terry lives in Oak Ridge and is interested in environmental and public health issues and is a volunteer with Methodist Medical Center.



*Leon Baker*

Leon Baker is a health physicist with ARS, Inc., which supports the OREM cleanup efforts. He was previously employed as a senior radiation protection technician with Spectra Tech Contracting Services, which supports multiple building decontamination and decommissioning projects at DOE facilities. Leon received a B.S. in Healthcare Management from Southern Illinois University, M. Ed. in Education from South College, and M.B.A. in Business Administration from Brenau University. Leon is a member of the National Association for the Advancement of Colored People, the East Tennessee Health Physics Society, and Habitat of Humanity. He has an interest in educational and labor issues. Leon is an Oak Ridge resident. He was appointed to the board in January 2015.



*David Branch*

David Branch was a rural letter carrier for the U.S. Postal Service in Knoxville for 20 years until his retirement in 2013. He was previously employed in the health care field and studied nursing at Walter State Community College in Morristown. A high school graduate, David lives in Knoxville and has an interest in environmental and historical preservation issues. He was appointed to the board in June 2017.



*Richard Burroughs*

Richard Burroughs most recently served as chief of staff for Anderson County, Tennessee, Mayor's office since 2012. Prior to that post, his professional experience included working as a registered professional geologist on aquifer characterizations and remediation in soil and groundwater environments.

His employment history includes 25 years working primarily with RCRA and CERCLA projects in various states. Richard received a B.S. in Geology from Southern Illinois University and an M.S. in Geology from the University of Arkansas. Richard lives in Oak Ridge and has an interest in environmental issues. He was appointed to the board in January 2015.



*Bill Clark*

William (Bill) Clark is a retired boilermaker with a wide range of experience both in his professional career and as the owner of a drilling rig, which provided firsthand insight into environmental issues. Bill graduated from the Tennessee College of Applied Technology with certification in combination welding. He completed the boilermaker apprentice program and radiation and fissile worker training. Bill previously served on the Morgan County Commission from 1986 to 1990 and has an interest in environmental and county/city governmental issues. He is a resident of Oakdale. He joined the board in 2018.



*Martha Deaderick*

Martha Deaderick is a retired educator who worked for the city school system in Oak Ridge from 1975 until 2004, where she specialized in English, social studies, Tennessee history and special education. She received a B.S. in Education and a Special Education Certificate from UT. Martha is a member of Tennessee Citizens for Wilderness Planning, Roane County Environmental Review Board, and Oak Ridge Schools Retired Teachers. She is a resident of Kingston. Martha was appointed to the board in July 2015.



*Sarah Eastburn*

Sarah Eastburn is the director of marketing and education outreach for the Tennessee Clean Water Network, which is a nonprofit devoted to promoting clean water and healthy communities. She has previously worked as a marketing executive with Aries Energy, an educational fellow with AmeriCorps, a media coordinator/language arts teacher, and an environmental development specialist. She earned a B.A. in Spanish Business and a B.A. in Mass Communications from the University of Wisconsin in Eau Claire. Sara has an interest in environmental and public health issues. She is a resident of Knoxville, Tennessee. She joined the board in 2018.





*Eddie Holden*

**Paul (Eddie) Holden** is a retired transportation logistics manager who worked with OREM from October 2004 until December 2014. Before that he worked for 31 years as a transportation logistics manager with Yellow Freight in various locations across the United States. He received a B.S. in Transportation Logistics from UT. A native of Oak

Ridge, he has an interest in environmental and economic development issues. Eddie is a resident of Knoxville. He was appointed to the board in July 2016.



*Belinda Price*

**Belinda Price** is a senior hydrogeologist with Alliant Corporation, where she has been employed since October 2011. Alliant Corporation provides services for the ORNL Safety Services Division. Belinda has not worked on any project related to EM or DOE at Oak Ridge. Belinda has more than 25 years of experience in environmental

investigation and environmental remediation as a geologist, hydrogeologist and task/project manager. She received a B.S. in Geology from the University of Bristol, U.K., and an M.S. in Hydrogeology from University College London, University of London, U.K. A certified professional geologist in multiple states, Belinda is a member of the Geological Society of America. Belinda lives in Knoxville. She has an interest in environmental issues. Belinda was appointed to the board in February 2013.



*Shell Lohmann*

**Michelle (Shell) Lohmann** is the human resources director for U.S. Cellular. Previously, she was the program manager for the University Recruiting and Graduate Education Programs for Oak Ridge National Laboratory/University of Tennessee in Knoxville. Shell is a member of the United Way of Greater Knoxville and has an interest in labor and

environmental issues. A high school graduate, Shell lives in Lenoir City. She was appointed to the board in June 2017.



*Leon Shields*

**Leon Shields** is the supervisor for field operations for the Lenoir City Utilities Board. He is also the owner of Instructional Concepts, which provides training in industrial, public, and private application of firearms, explosives, vehicle extrication, and rescue operations. He is a firearms instructor/deputy for the Loudon County Sheriff's Office, an

instructor/third party examiner for the State of Tennessee, a firefighter director with Loudon County Fire Rescue, Chairman of the Lenoir City Planning Commission/Board of Zoning Appeals, a Commissioner with the Lenoir City Housing Authority/Rural Development, and a Commissioner with the Loudon County Regional Planning Commission. A high school graduate, Leon is a member of a number of civic organizations, including the Boys and Girls Clubs of Tennessee Valley, Lenoir City High School Technical Advisory Board, the local chamber of commerce, and others. Leon lives in Lenoir City and has an interest in civic issues. He was appointed to the board in June 2017.



*Marité Pérez*

**Marité Pérez** is a mortgage loan officer at First Community Mortgage. Previously, she worked with Latin and Haitian communities in the Dominican Republic as a Community Economic Development Advisor through the Peace Corps. She has also worked a Business Development Manager for a solar firm. Marité is a volunteer with Centro Hispano of

East Tennessee, which promotes empowerment and civic participation of the multicultural community. She has a B.A. in International Affairs/International Business from Florida State University and an M.B.A. in Global Social Sustainable Enterprise from Colorado State University. Marité lives in Knoxville. She joined the board in 2018.



*Brooke Pitchers*

**Brooke Pitchers** is a recent graduate of Roane State Community College in Harriman, where she received an Associate of Applied Science degree in Environmental Health Technology. She also completed a 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) certification course. She was a member of Phi Theta

Kappa Sorority and was a founding member of the Adult Advisory Council. Brooke coaches youth soccer and baseball, and has an interest in environmental and public health issues. Brooke lives in Harriman. She joined the board in 2018.



*Bonnie Shoemaker*

**Bonnie Shoemaker** retired in 2008 after 34 years at the DOE East Tennessee Technology Park and ORNL working in a variety of capacities, including chemical laboratory analyst, environmental compliance specialist, plant shift superintendent, emergency management specialist, and engineering technician. She is the recipient of two

awards for operations and technical support in environmental compliance and emergency management. Bonnie received her B.S. in Biology from UT. She has an interest in environmental and public health issues. Bonnie lives in Clinton. She was appointed to the board in June 2017.



*Deni Sobek*

Beautiful. Deni lives in Oak Ridge. She was appointed to the board in July 2016.

**Deni Sobek** is a teacher with Oak Ridge City Schools, where she has been employed since 2003. She received her B.S. in Botany from Iowa State University and a Teaching Certification in Science from Texas Tech University. Deni is a member of the National Science Teachers Association, the Tennessee Teachers Association and Keep Anderson County



*Ed Trujillo*

Edmundo (Ed) Trujillo retired as a project manager from Bechtel Corporation in 2012. He managed the engineering and construction of a maintenance facility for heavy duty mining equipment in Chile in 2011-2012. From 2008 until 2011, he managed three environmental projects for Bechtel at the ETPP in Oak Ridge. During his 35-year career, he has worked on a wide variety of projects at DOE, the U.S. Air Force and private sector facilities. Ed received a B.S. in Engineering from the University of Wisconsin. He has an interest in civic and environmental issues. Ed lives in Oak Ridge. He was appointed to the board in January 2015.

**Edmundo (Ed) Trujillo** retired as a project manager from Bechtel Corporation in 2012. He managed the engineering and construction of a maintenance facility for heavy duty mining equipment in Chile in 2011-2012. From 2008 until 2011, he managed three environmental projects for Bechtel at the ETPP in Oak Ridge. During his 35-year career, he has worked on a wide variety of projects at DOE, the U.S. Air Force and private sector facilities. Ed received a B.S. in Engineering from the University of Wisconsin. He has an interest in civic and environmental issues. Ed lives in Oak Ridge. He was appointed to the board in January 2015.



*Fred Swindler*

Fred Swindler is a vice president and consultant for quality assurance and regulatory affairs with IsoRay Medical, Inc. in Richland, Washington. He was previously employed as a vice president for quality assurance and regulatory affairs with two other medical manufacturing companies. Fred received a B.S. in Biomedical Engineering from Rose Hulman Institute of Technology in Terre Haute, Indiana, and an M.B.A. from the University of Evansville, Indiana. He is a senior member of the American Society for Quality and has an interest in environmental and public health issues. Fred lives in Rockwood. He was appointed to the board in July 2016.

**Fredric (Fred) Swindler** is a vice president and consultant for quality assurance and regulatory affairs with IsoRay Medical, Inc. in Richland, Washington. He was previously employed as a vice president for quality assurance and regulatory affairs with two other medical manufacturing companies. Fred received a B.S. in Biomedical Engineering from Rose Hulman Institute of Technology in Terre Haute, Indiana, and an M.B.A. from the University of Evansville, Indiana. He is a senior member of the American Society for Quality and has an interest in environmental and public health issues. Fred lives in Rockwood. He was appointed to the board in July 2016.



*Rudy Weigel*

Rudolf (Rudy) Weigel is a retired industrial hygienist who most recently worked for Concurrent Technologies Corporation in Arlington, Virginia, conducting industrial hygiene surveys at various Army installations in support of the Army Public Health Command until 2015. From 2002 to 2011 he served as a senior industrial hygienist/safety and health representative with Bechtel Jacobs Company in Oak Ridge. His 36-year career has included work as a bioenvironmental engineer, environmental scientist, and hazardous waste program coordinator. Rudy received a B.S. in Occupational Health and Safety from Utah State University, and an M.S. from East Tennessee State University. He was a member of the American Conference of Governmental Industrial Hygienists. He has an interest in environmental and decontamination and decommissioning issues. Rudy lives in Oak Ridge. He was appointed to the board in July 2016.

**Rudolf (Rudy) Weigel** is a retired industrial hygienist who most recently worked for Concurrent Technologies Corporation in Arlington, Virginia, conducting industrial hygiene surveys at various Army installations in support of the Army Public Health Command until 2015. From 2002 to 2011 he served as a senior industrial hygienist/safety and health representative with Bechtel Jacobs Company in Oak Ridge. His 36-year career has included work as a bioenvironmental engineer, environmental scientist, and hazardous waste program coordinator. Rudy received a B.S. in Occupational Health and Safety from Utah State University, and an M.S. from East Tennessee State University. He was a member of the American Conference of Governmental Industrial Hygienists. He has an interest in environmental and decontamination and decommissioning issues. Rudy lives in Oak Ridge. He was appointed to the board in July 2016.



*John Tapp*

John Tapp is a retired civil and environmental engineer with nearly 50 years of experience in all areas of environmental protection and restoration, including private and public utility management, civil and environmental engineering, strategic planning, budgeting, and project development. John most recently worked for HDR-ICA Engineering, where he provided consulting in a broad range of areas, including environmental permitting and interaction with state and federal regulatory agencies. Prior to that he served with the Kentucky Infrastructure Authority, where he managed the statewide planning effort for the Authority. John was a founding partner in Commonwealth Technology, a large environmental and engineering consulting firm, and has previously worked with the Kentucky Division of Water, the EPA, and the U.S. Public Health Service. John received his B.S. and M.S. degrees in Civil Engineering and his Ph.D. in Agricultural Engineering from the University of Kentucky. John has an interest in environmental and economic issues. He is a member and past president of the Kentucky-Tennessee Water Environment Association, and is a member of the Water Environment Federation and the Barrington Neighborhood Association. John lives in Powell. He was appointed to the board in June 2017.

**John Tapp** is a retired civil and environmental engineer with nearly 50 years of experience in all areas of environmental protection and restoration, including private and public utility management, civil and environmental engineering, strategic planning, budgeting, and project development. John most recently worked for HDR-ICA Engineering, where he provided consulting in a broad range of areas, including environmental permitting and interaction with state and federal regulatory agencies. Prior to that he served with the Kentucky Infrastructure Authority, where he managed the statewide planning effort for the Authority. John was a founding partner in Commonwealth Technology, a large environmental and engineering consulting firm, and has previously worked with the Kentucky Division of Water, the EPA, and the U.S. Public Health Service. John received his B.S. and M.S. degrees in Civil Engineering and his Ph.D. in Agricultural Engineering from the University of Kentucky. John has an interest in environmental and economic issues. He is a member and past president of the Kentucky-Tennessee Water Environment Association, and is a member of the Water Environment Federation and the Barrington Neighborhood Association. John lives in Powell. He was appointed to the board in June 2017.



*Dennis Wilson*

Dennis Wilson is a retired technology manager who most recently was employed by Johnson Diversey Products (now Sealed Air) as the director of technology and intellectual property until 2009. While much of his 39-year career was focused on technology and intellectual property management, his early career included work as a resin and polymer chemist, for which he was awarded seven global patents. He received a B.S. in Chemistry from the University of Wisconsin in Parkside, an M.S. and Ph.D. in Material Science from the University of Connecticut, and certifications in a wide range of technology and management courses. Dennis has an interest in economic development and environmental issues. Dennis lives in Rockwood. He was appointed to the board in July 2015.

**Dennis Wilson** is a retired technology manager who most recently was employed by Johnson Diversey Products (now Sealed Air) as the director of technology and intellectual property until 2009. While much of his 39-year career was focused on technology and intellectual property management, his early career included work as a resin and polymer chemist, for which he was awarded seven global patents. He received a B.S. in Chemistry from the University of Wisconsin in Parkside, an M.S. and Ph.D. in Material Science from the University of Connecticut, and certifications in a wide range of technology and management courses. Dennis has an interest in economic development and environmental issues. Dennis lives in Rockwood. He was appointed to the board in July 2015.



## Agency Liaisons

These individuals serve as points of contact between the board and their respective agencies. A DOE liaison must be present at all board meetings. TDEC and EPA liaisons are often on hand to contribute to discussion and answer board member questions.



*Connie Jones*  
EPA

Constance “Connie” Jones represents Environmental Protection Agency. She is part of the Superfund Division in the agency’s Region 4 Office, which covers the Southeast.



*Jay Mullis*

John Arthur (Jay) Mullis II is the Manager of the Department of Energy’s Oak Ridge Office of Environmental Management (OREM). He was selected to this position in November 2017. He is responsible for safely executing the environmental cleanup of the 32,400-acre Oak Ridge Reservation



*Kristof Czartoryski*  
TDEC

Kristof Czartoryski is an environmental consultant with the Tennessee Department of Environment and Conservation. He is part of the agency’s Division of Remediation in Oak Ridge.



*David Adler*

David Adler serves as the Deputy Designated Federal Officer for ORSSAB. He is director of the Quality and Mission Support Division for the Oak Ridge Office of Environmental Management.



*Melyssa Noe*

Melyssa Noe serves as the board’s Alternate Deputy Designated Federal Officer. She is branch chief of program support in the Quality and Mission Support Division for OREM.