# OAK RIDGE SITE SPECIFIC ADVISORY BOARD

# NEW MEMBER ORIENTATION MANUAL

# Oak Ridge Site Specific Advisory Board
# New Member Orientation Manual

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Oak Ridge Site Specific Advisory Board

# Introduction to ORSSAB

The Oak Ridge Site Specific Advisory Board

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# Common Abbreviations and Acronyms

These are some of the most common terms you will find in this document and hear about during your time as a member. A full list of routinely used abbreviations and acronyms is maintained by board staff and distributed at need..

BCBG ..... Bear Creek Burial Grounds
CERCLA ..... Comprehensive Environment Response, Compensation, and Liability Act
COLEX ..... Column Exchange
D&D ..... Decontamination and Decommissioning (or Demolition)
DDFO ..... Deputy Designated Federal Officer
DOE ..... U. S. Department of Energy
EFPC ..... East Fork Poplar Creek
EM ..... Environmental Management
EMAB ..... Environmental Management Advisory Board
EMDF ..... Environmental Management Disposal Facility
EMWMF ..... Environmental Management Waste Management Facility
EPA ..... U. S. Environmental Protection Agency
ETTP ..... East Tennessee Technology Park
EUWG ..... End Use Working Group
FACA ..... Federal Advisory Committee Act
FFA ..... Federal Facility Agreement
FY ..... Fiscal Year
Hg ..... Elemental mercury
LM ..... Office of Legacy Management
MSRE ..... Molten Salt Reactor Experiment
NNSA ..... National Nuclear Security Administration
OREM ..... Oak Ridge Office of Environmental Management
ORNL ..... Oak Ridge National Laboratory
ORR ..... Oak Ridge Reservation
ORSSAB ..... Oak Ridge Site Specific Advisory Board
RCRA ..... Resource Conservation Recovery Act
ROD ..... Record of Decision
S&M ..... Surveillance and Maintenance
SWSA ..... Solid Waste Storage Area
TDEC ..... Tennessee Department of Environment and Conservation
TSCAI ..... Toxic Substances Control Act Incinerator
UCOR ..... URS|CH2M Oak Ridge LLC (the prime cleanup contractor for DOE Oak Ridge)
Y-12 ..... Y-12 National Security Complex

# What is the Oak Ridge Site Specific Advisory Board?

The Oak Ridge Site Specific Advisory Board (ORSSAB) is a federally chartered citizens' panel that provides independent advice and recommendations to the U.S. Department of Energy's (DOE) Oak Ridge Environmental Management (OREM) program. OREM is responsible for cleaning up areas of the Oak Ridge Reservation (ORR) that have been contaminated with radioactive or hazardous wastes.

ORSSAB can have as many as 22 members. Individuals apply for membership and are selected by DOE to reflect a diversity of occupations, interests, gender, and race of persons living near the ORR. Technical expertise in the environmental field is not a requirement for membership, although DOE strives to have a good mix of technical and non-technical people on the board to reflect the community surrounding the reservation.

*ORSSAB's primary responsibility is to provide advice and recommendations to DOE EM on its cleanup and waste management operations on the ORR.*

Board leadership includes the chair, vice chair, and secretary who are elected annually and can serve in those positions for up to two years. ORSSAB also has non-voting agency liaisons from the Environmental Protection Agency (EPA) Region 4, the Tennessee Department of Environment and Conservation (TDEC), and DOE. The board has a DOE Deputy Designated Federal Officer (DDFO) and two Alternate DDFOs. See Appendix A for details. As part of its education mission, ORSSAB seats two non-voting student representatives from local high schools each year.

ORSSAB's primary responsibility is to provide advice and recommendations to DOE EM on its environmental cleanup and waste management operations on the ORR. In addition, the board provides input to DOE on cleanup project prioritization as it relates to OREM's annual fiscal year (FY) +2 budget request. Stewardship of areas with residual contamination following completion of cleanup work is also of significant interest to the board.

ORSSAB has committees that address particular issues. The current standing committees are EM & Stewardship and the Executive Committee. Additional committees may be formed as needed.

***The Executive Committee***

General board business is handled by the Executive Committee, which is composed of the elected officers of the board and the chair of the EM & Stewardship Committee. The committee holds general administrative authority to set board agendas, coordinate the work of the committees, and transact business as may be necessary between board meetings.

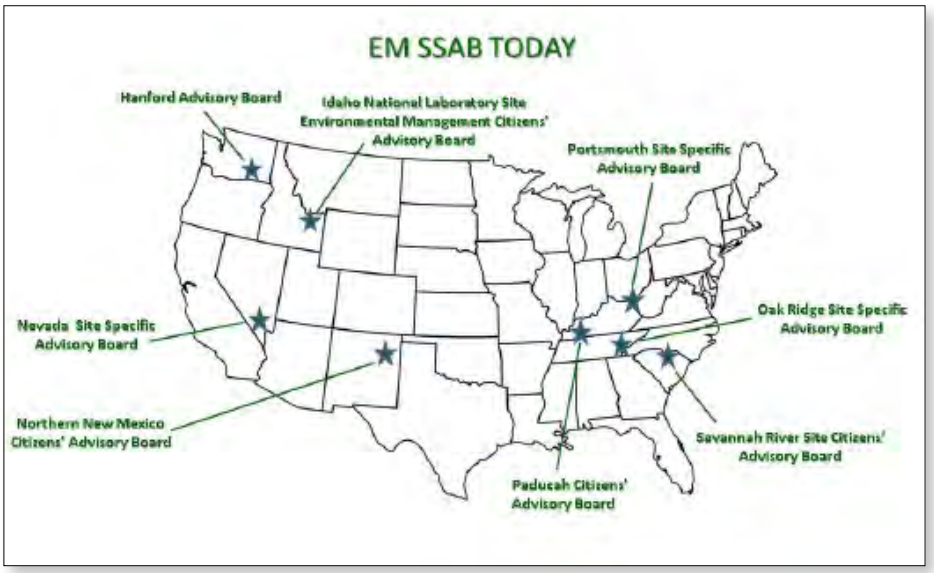
***The EM & Stewardship Committee***

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 creates recommendations to be considered at full board meetings. All board members are part of this committee.

***Federal Advisory Committee Act (FACA)***

The Oak Ridge board is one part of a national EMSSAB organization that is chartered under FACA to provide input to DOE nationwide on its cleanup activities. Currently there are seven other local boards that make up the EMSSAB. The other boards are located at:

- Hanford, Washington
- Idaho Falls, Idaho
- Las Vegas, Nevada
- Los Alamos, New Mexico
- Paducah, Kentucky
- Portsmouth, Ohio
- Aiken, South Carolina




*The EMSSAB consists of eight site specific boards across the country.*

All of the local SSABs (sometimes designated as Citizens' Advisory Boards or CABs) provide input to DOE on its local cleanup activities, but each board has its own set of bylaws, committee structure, and operating procedures. Twice each year the leadership of the eight boards meet jointly with DOE EM representatives from Washington, DC to discuss common issues. The locations of these 'chairs' meetings usually rotate among the boards.

While each board provides its local DOE sites with advice and recommendations, recommendations may also be crafted and agreed to at the chairs' meetings to send to DOE Headquarters as the EMSSAB.

Be aware that there is another national advisory board, the Environmental Management Advisory Board (EMAB), which was created to provide input directly to the DOE Assistant Secretary for EM on corporate issues relating to site cleanup and risk reduction.

*ORSSAB hosted the Spring 2016 EMSSAB Chairs' meeting.*

EMAB is also charted under FACA, but its membership differs from that of the EMSSAB and the site specific boards in that all members are technical experts in their fields. Currently the EMSSAB and EMAB have little interaction. Just be aware of its existence, as sometimes there is confusion about respective functions of the EMSSAB and the EMAB.

Other local groups and entities, like the Environmental Quality Advisory Board, also provide input to OREM. ORSSAB, however, is the designated communications link between the public and the OREM program. It is the only group to which DOE must respond when it makes recommendations and comments on EM activities.

## Your Responsibility as a Board Member

There is a lot to learn and it can all seem overwhelming at first, but we hope this introduction to the board and the work underway on the ORR will help you get a quick grasp of what's going on.

As a member you are expected, of course, to **attend board meetings**. If you are absent from two consecutive meetings, you'll be contacted by the board secretary to determine if there is a problem. The board has the right to ask DOE to remove a member with two consecutive absences from the board. This usually doesn't happen with two absences, but three or more consecutive absences could trigger that process.

Perhaps the most difficult thing is **learning the language** if you're not already familiar with work on the reservation. There is a myriad of abbreviations and acronyms to learn and understand. We ask presenters at board and committee meetings to provide some background information on the topics they are discussing and not to use acronyms without first explaining what they mean, but it's very easy for everyone to slip into using acronyms and abbreviations. Do not be afraid to speak up and ask what an acronym or abbreviation is and what it means. Before long you'll be the one helping newer members. Similarly, don't be afraid to **ask questions at board and committee meetings**. The chances are someone else has the same question. Take advantage of experienced members and talk to them about topics to learn more. The DOE, EPA, and TDEC liaisons can also help you, as well as the ORSSAB staff.

You will also be expected to **serve on the EM & Stewardship Committee**. As you gain experience you will be expected to be an issue group member or perhaps manager for a particular topic or two. Issue groups do research on a topic and draft initial recommendations for the committee to discuss further. ORSSAB staff and DOE liaisons provide help to issue groups during the drafting process.

**Go on a tour of the reservation**. Staff will set up tours for new members. Tours of particular facilities relevant to a monthly meeting topic are regularly scheduled during the time between board and committee meetings; take advantage of those. On occasion, training sessions and workshops are also organized. These are always good opportunities to learn more about board-related work and cleanup programs.

Staff regularly provides a table of travel opportunities to meetings, workshops and conferences that are beneficial to board members. Request to attend those opportunities when you can.

Requests for travel should be sent to staff. They are approved by the Executive Committee. OREM provides reimbursement for many associated expenses for approved travel. The OREM travel coordinator will assist you with setting up flights, hotels, etc.

*ORSSAB members tour the Low Level Gaseous Waste Facility at ORNL in 2019.*

# How Recommendations Are Made

ORSSAB can make recommendations on plans or work underway just about any time it feels a recommendation is necessary. Usually, though, a recommendation is generated as the result of a presentation to the full board or the EM & Stewardship Committee. DOE can also explicitly request a recommendation on a particular issue or topic. While not common, an individual board member or members can submit a recommendation to the board.

### The Recommendation Process

1. Topic presentation given to the board at its monthly meeting
2. EM & Stewardship Committee decides to issue a recommendation (or not)
3. Issue group, led by an issue manager, creates a draft document
4. Issue manager presents the draft for discussion and vote at committee meeting
5. Approved recommendation sent to the Executive Committee
6. Executives vote to put the recommendation to the full board or back to committee for edits
7. Board votes on the recommendation
8. Approved recommendation sent to DOE, which must respond

The job of writing a recommendation is delegated to the EM & Stewardship Committee. At the committee level, an issue manager is assigned to work on the topic and is responsible for drafting a recommendation if research supports that one is warranted. Several other members generally serve on the issue group for each particular topic. Members are encouraged to serve on at least two issue groups

After the recommendation is drafted, it is reviewed by the committee and revisions may be made. Once the committee votes on the recommendation, it is sent to the Executive Committee. The Executive Committee reviews it and agrees to put it before the entire board for discussion unless there is some reason it feels the recommendation is not ready to go to the board, in which case it is returned to the committee.

Upon approval, the recommendation is then presented to the board by the issue manager. If the recommendation is passed by the board then it is sent to either the OREM manager or to an appropriate person at DOE Headquarters. If the recommendation is approved but there are some members who cannot support the recommendation, a minority opinion may be written and attached to the recommendation.

DOE is required to respond to the recommendation. It can either accept the recommendation or decline it, but it must answer the board. Once a response is received, it is reviewed to determine if the response is adequate or if it needs follow up with a subsequent recommendation.

### Example: Environmental Management Budget Requests

Each year ORSSAB is asked to provide input to the DOE OREM Program regarding the development of its budget request to headquarters. Budget requests are made for the fiscal year two years beyond (FY+2) the current fiscal year.

The Executive Committee and the EM & Stewardship Committee review previous presentations and DOE's Oak Ridge cleanup priorities, which help DOE set its budget requests to headquarters. The committee considers various cleanup scenarios developed by DOE that consider funding, technical challenges, availability of resources, etc. From these scenarios the committees develop a recommendation to DOE on how work should be prioritized for Oak Ridge, which is then voted on by the board.

# What is the DOE EM Program?

DOE's EM program is responsible for waste management and cleaning up areas operated by the department that have been contaminated by radioactive or hazardous waste as a result of nuclear weapons development, nuclear energy research activities, or waste disposition. Some of the waste sites date to the World War II Manhattan Project, which was the massive effort to develop the first atomic bomb, or were involved in Cold War-era activities or both.

*The DOE EM Program is responsible for cleaning up the Oak Ridge Reservation.*

The DOE Office of EM was established in 1989 to oversee the cleanup of DOE facilities throughout the United States. That same year the ORR was placed on the EPA National Priorities List as a site requiring cleanup. As a result, the EM program was initiated in Oak Ridge.

### Oak Ridge Office of Environmental Management (OREM)

Oak Ridge is one of the original sites that was part of the Manhattan Project. Its three main plants of K-25, Y-12, and X-10 worked to come up with methods to enrich uranium or produce plutonium for use in atomic weapons. Y-12 is now Y-12 National Security Complex (Y-12); K-25 was later renamed East Tennessee Technology Park (ETTP); and X-10, which refers to a graphite reactor facility on the site, is now Oak Ridge National Laboratory (ORNL). Each plant played discrete roles in the work and pursued different methods. As a result of that work and subsequent work in nuclear research, parts of the reservation are contaminated with radioactive or hazardous waste. It's EM's job to clean up these areas, and ORSSAB provides input on that work.

At Y-12 OREM is working to address excess contaminated facilities, remove mercury soil and groundwater contamination, and enable modernization that allows the National Nuclear Security Administration (NNSA) to continue its crucial national security and nuclear non-proliferation responsibilities. At ORNL OREM is addressing risks at excess contaminated facilities and working to process and disposition decades of waste associated with isotope research and production. The program is enhancing safety at ORNL and making way for DOE to continue its advanced supercomputing, materials, and energy research.

The primary mission of OREM is to protect the region's health and environment, ensure the department's vital missions locally, and finally, to make land clean and available for future use. OREM's work is guided under provisions set out by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Cleanup administrative processes are set out in the ORR Federal Facility Agreement (FFA), signed by DOE Oak Ridge, EPA, and TDEC and implemented January 1, 1992. For more information on the FFA, see Appendix B.

In addition to OREM, other DOE programs at ORR are the Office of Science, the NNSA, and the Nuclear Energy program. Because these programs have active missions, OREM collaborates with them when it comes to cleanup activities at Y-12 and ORNL. They must all work together to make sure current missions are not interrupted while cleanup activities are underway.

Let's take a look at the areas where OREM is performing cleanup and ORSSAB provides advice. OREM publishes the annual Cleanup Progress Report to provide details on work completed and underway. The latest copy is included in your binder. There are many projects and we can't review all of them, but the following are the major areas. You'll learn about additional cleanup operations as you serve on the board.

The three main plants — ETTP, ORNL, and Y-12 — are within the confines of the ORR, which totals more than 30,000 acres. The entire ORR is within the city limits of Oak Ridge, which is unique to all the other sites of the EMSSAB. It's important to understand that only a small portion of the ORR is impacted by radioactive or hazardous waste contamination. More information on individual projects can be found in DOE fact sheets included in your binder. They are updated regularly at energy.gov/orem/services/site-cleanup/cleanup-fact-sheets.

## East Tennessee Technology Park (ETTP) - formerly the K-25 Gaseous Diffusion Plant

The K-25 Gaseous Diffusion Plant was one of the plants in Oak Ridge that was built to enrich uranium for use in weapons and later for nuclear power plants. Its main buildings were the process facilities for enriching uranium. The first was K-25, which was the world's largest building when it was constructed in 1943. After World War II, additional uranium processing facilities were built: K-27, K-29, K-31, and K-33. They were later shut down in stages and all enrichment activities ended by 1987. In addition to the five process buildings, scores of other support buildings were built at the site.

In 1997 the site was renamed East Tennessee Technology Park as part of OREM's goal to convert the site into a commercial industrial park. Success depends on the decontamination and demolition (D&D) of almost all of the structures, the remediation of contaminated soil, and the monitoring/treatment of contaminated groundwater. In 2020, OREM achieved its Vision 2020 goal of completing core cleanup at the site, which included demolishing more than 500 structures and addressing major areas of soil

*The majority of the Oak Ridge Reservation is within the boundaries of the City of Oak Ridge. The three main plants in the reservation are East Tennessee Technology Park, Oak Ridge National Laboratory, and Y-12 National Security Complex.*

*The K-25 Gaseous Diffusion Plant was renamed East Tennessee Technology Park in 1997. In 2020, OREM achieved its Vision 2020 goal of completing core cleanup at the site, which included demolishing more than 500 structures and addressing major areas of soil contamination. This is how the site looked before major demolition work began.*

contamination. It marked the first time in the world an entire uranium enrichment complex had been removed, and it is also DOE's largest completed environmental cleanup effort to date.

DOE transfers appropriate pieces of remediated land back to the community for the creation of a private-sector industrial park. So far, more than 1,300 acres have been transferred and an additional 600 acres are slated for transfer in the years ahead. OREM has also transferred some buildings intact, emergency services, rail lines, and most of the domestic water supply and sanitary sewer infrastructure, and it completed modifications to most electrical infrastructure, allowing it to be transferred. Another 3,000 acres have been placed in a conservation easement that is open to the public for recreational use, and more than 100 acres have been set aside for historic preservation efforts.

With all the demolition complete, the remaining soil and groundwater remediation required at the site moves to the forefront. That work is expected to continue through 2024.

**Summary of Some Major ETTP Projects**

- K-1200 Centrifuge Complex: Crews in June 2020 completed demolition of this complex, which included facilities constructed between 1975 and 1985 and spanning more than 235,000 square feet. The complex was built to develop, test, and demonstrate the ability to enrich uranium using centrifuge technology. The complex included some of the largest and most recognizable structures remaining at ETTP, including the site's tallest facility, at 180 feet.
- Poplar Creek Facilities: Before demolition began in this area in 2017, the Poplar Creek Facilities were comprised of 11 large buildings and numerous structures built in the 1940s and 1950s to support the site's former nuclear program. OREM finished demolishing the last two buildings, K-131 and K-631, in fall 2019. Building K-131 was built to provide purified uranium hexafluoride to the uranium enrichment cascade. Through the years, it was used for a variety of other purposes until Oak Ridge's uranium enrichment operations ceased in 1985. Building K-631 was used to withdraw gaseous depleted uranium hexafluoride from the cascade, convert it to liquid, and transfer it into transport cylinders.
- Gaseous Diffusion Plant: In 2016, Oak Ridge became the first site in the world to successfully remove all of its former gaseous diffusion uranium enrichment buildings (K-25, K-27, K-29, K-31, and K-33). With a footprint of 4.5 million square feet, decontamination and demolition of the five buildings was difficult and spanned a decade. Now, ETTP is safer, cleaner, and has large parcels of land that are available for redevelopment.

Stored Material

ETTP was the storage site for a variety of waste materials including low-level radioactive waste, PCB waste, depleted uranium oxide, sodium, and nickel. More than 26,000 containers of legacy low-level and mixed low-level waste were treated and disposed by 2005. In fall 2020, crews removed the last of all containers of stored wastes from ETTP, eliminating all wastes managed under the Resource Conservation and Recovery Act (RCRA) from the site. OREM also excavated a waste burial ground and contaminated rock quarry.

Groundwater Strategy

A number of areas at ETTP have contaminated groundwater plumes. In November 2019, OREM released a draft Groundwater Feasibility Study report on the Main Plant Area at the site. The report, once finalized, will serve as the basis for making decisions on how to proceed with groundwater cleanup. A final site-wide Record of Decision (ROD) will address groundwater once all other activities at the site are complete. OREM places a significant focus on this topic. OREM has more than 2,000 monitoring wells across the ORR and spends an average of $15 million annually on groundwater-related work.

Soils Remediation

ETTP is divided into two zones. Zone 1 surrounds the main industrial complex of the plant, which is Zone 2. Some areas of Zone 1 have contaminated soil. In 2002 DOE, EPA, and TDEC signed an interim ROD on soil remediation in Zone 1. A final ROD will be produced after cleanup is done. Zone 2 contains shallow soil contamination throughout the area and a few locations with deeper soil contamination that could prove hazardous to future industrial workers. OREM removes contaminated soil as part of building demolition.

## Oak Ridge National Laboratory (ORNL)

Originally known as Clinton Laboratories, ORNL was established in 1943 to carry out the pilot-scale production and separation of plutonium for the World War II Manhattan Project. You may also hear it referred to as X-10, which was the designation of the graphite reactor facility there. The lab was also highly involved in isotope research and production. From this foundation, ORNL has evolved into a unique resource for addressing important national and global energy and environmental issues. The EM program is conducting projects that will enhance safety at the site and enable their globally-important research to continue and grow.

ORNL is a challenging site for remediation for many reasons. It is an active operational research center, having dealt with a multitude of chemical elements, compounds, and radioactive materials. Cleanup must be performed in a manner that does not impact current research activities.

*An aerial view of the Oak Ridge National Laboratory campus.*

Uranium-233 Disposition Project

A large inventory of uranium-233 (U-233) is stored at ORNL. Since U-233 is a special nuclear material that requires strict safeguards and security, efforts are underway to remove the entire inventory from Building 3019, which is the oldest operating nuclear facility in the world.

The project includes two phases. The first phase involved directly disposing approximately half of the inventory, while the second phase involves extracting thorium from the remaining U-233 inventory for next-generation cancer research before downblending to enable its disposition. OREM completed the first phase of the project in 2017 and began phase two in 2019.

**Excess Contaminated Facilities**

ORNL has more than 120 excess contaminated facilities, mostly in the central campus area, that require attention. Many of these buildings are in disrepair and contain significant hazards and risks that could threaten ongoing missions at the site. OREM has several projects underway that are removing risks and stabilizing facilities. Crews are actively addressing numerous facilities in the central campus area, which houses aging, former research reactors and isotope production labs. Workers are tearing down the two remaining contaminated structures that were part of Building 3026. Deactivation is underway in three former research reactors—the Low Intensity Test Reactor, the Bulk Shielding Reactor, and the Oak Ridge Research Reactor, and teams are moving the Experimental Gas-Cooled Reactor to the 'cold and dark' state. OREM is also deactivating nine isotope research and productions labs this year.

Molten Salt Reactor Experiment (MSRE)

The Molten Salt Reactor operated from 1965-1969 to test the concept of a reactor fueled by molten salt that flowed through the reactor chamber. When the reactor was shut down, the salt was drained into three storage tanks, where it solidified.

The tanks are located in underground, concrete-shielded cells. The reactor fuel in the salt mixtures has been removed, but the salts themselves are contaminated and still need to be properly disposed. OREM performed engineering evaluations for the building to determine how to reduce risks and how best to deal with the remaining salts. Results from that and other analyses are informing new plans, including ongoing upgrades to the electrical and ventilation systems that will enhance safety in the building. ORSSAB toured the building in April 2019

Building 3026 Hot Cells

Building 3026 dated to the Manhattan Project and the postwar era, when one of the ORNL's primary missions was the production of radioactive isotopes for medical, research, and industrial uses. The outer structure was demolished in 2010, but the 'hot cells' from inside the building remained. They were sealed with fixative while plans were made for final disposition. In April 2012, four of the six hot cells were demolished and disposed. Crews have installed a six-story protective cover over the hot cells so nearby facilities and research will not be impacted when demolition begins in early 2021.

*In early 2021, crews will begin demolishing the final two remaining hot cells (circled) from Building 3026.*

*ORNL's Central Stack is part of an aging ventilation system that has reached the end of its usefulness.*

Central Stack System

The 3039 stack, built in 1950, has been in operation almost continuously since its construction. The 250-foot stack discharges a total gas volume annually of about 66 billion cubic feet. Exhaust gases from the various facilities at ORNL are vented through the central stack. Eventually all facilities will be removed from the system and the stack will be demolished.

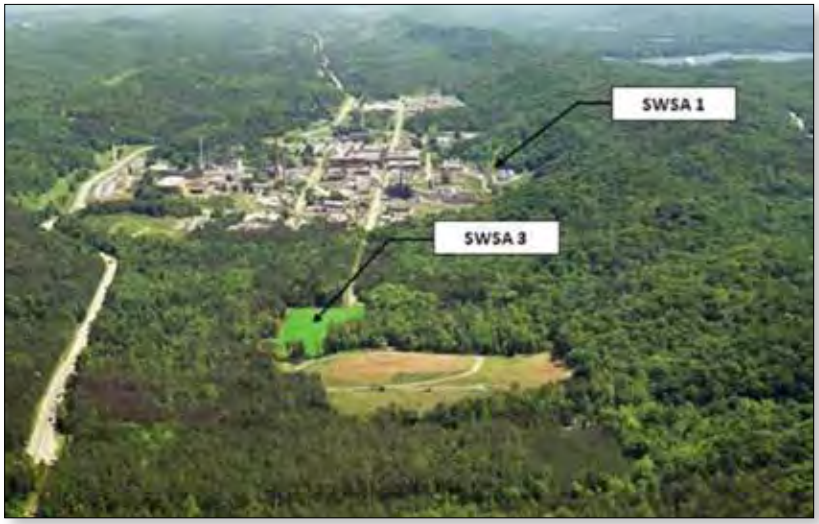
Tank W-1A/Corehole 8 Plume

The Tank W-1A site received waste from nearby process Building 3019. Over the years a myriad of radioactive isotopes, leaked from the tank and the pipeline into the surrounding soil and groundwater. In January 2012 the tank was successfully removed. The leaks also resulted in an extensive contaminated groundwater plume known as the Corehole 8 plume. New wells and a pump system were installed in 2012 to treat groundwater. Ongoing monitoring shows the plume has been contained.

Bethel Valley Burial Grounds

The Bethel Valley Burial Grounds, which have been remediated, include the former waste disposal sites Solid Waste Storage Areas (SWSA) 1, in the southern portion of the ORNL central campus, and SWSA 3 West, away from the main central campus of ORNL.

DOE continues to monitor the sites with regular inspections and water sampling. SWSA 1 was a source of contaminant release in Bethel Valley. To stop the contaminant releases, work was done to place a low permeability, multi-layer cap over the waste area. Capping SWSA 1 was completed in 2010. SWSA 3 work included removal and disposal of 'hot spot' contaminated soils under a multilayer cap. Construction, which was completed in 2011, included placing a cap over SWSA 3, the adjacent Closed Scrap Metal Area, and some of the contaminated soil areas.




*Two former waste disposal sites near ORNL have been remediated.*

Bethel Valley Soils and Sediment Project

This project includes field walkover assessments and soil/sediment sampling to identify areas where environmental releases have occurred and lab research activities have been conducted. Characterization data will be used to determine if cleanup actions are necessary and what the boundaries of the contaminated sites are.

*A burial ground area during remediation work, left, and after, right.*

Melton Valley

Melton Valley is located southwest of the main ORNL campus. A large portion of that area was used for waste burial. In 2006 remediation work was completed on a number of burial grounds, storage pits, and trenches. What remains to be addressed in Melton Valley are some inactive reactors, watershed area ecology, sediment, and groundwater.

A line of monitoring wells has been installed on the west side of the Clinch River to ensure contamination is not migrating away from the Melton Valley burial grounds in groundwater underneath the Clinch River and into private wells on the other side of the river. Clean water has been provided to the property owners to ensure they are not exposed to any harmful contaminants and to prevent the wells from pulling the groundwater from Melton Valley. The wells are monitored to determine if there is groundwater flow and to detect potential contaminants.

Trench 13

During remediation of Melton Valley in 2005, workers excavating an area known as Trench 13 encountered glass containers holding materials that could spontaneously ignite on contact with air. When the excavators broke one of the vessels, there was brief flare up. Work was suspended and the trench was stabilized and covered. DOE has requested input from ORSSAB on the management of the material that remains in the trench. It is also preparing a revised engineering evaluation for disposal of the waste.

## Y-12 National Security Complex (Y-12)

Y-12 was built during World War II to enrich uranium. In the years following World War II, Y-12's mission has expanded to focus on dismantling nuclear weapons components, while also serving as one of the nation's storehouses for special nuclear materials.

*An aerial view of Y-12.*

Historically, Y-12's operations used large amounts of mercury. During the 1950s and 1960s, an estimated 700,000 pounds of mercury leaked from equipment into the buildings, basements, and surrounding environment. Keep in mind that mercury (often abbreviated as Hg) is much heavier than other liquids. A pound of mercury is slightly more than one fluid ounce by volume. A gallon of mercury weighs almost 113 pounds.

Ongoing efforts to capture and treat water leaving the facility have significantly reduced mercury in nearby creeks and streams.

**Excess Contaminated Facilities**

Y-12 has more than 90 excess contaminated facilities, and many qualify as higher-risk facilities. These buildings have not operated for decades, are in disrepair, and contain significant hazards and that could threaten ongoing missions at the site. OREM has several projects underway that are removing risks, stabilizing facilities, and removing the structures.

*Workers pour mercury from COLEX equipment into a container designed to hold 1,000 pounds of the element.*

Alpha-4

Alpha-4 housed equipment in the 1950s and 1960s that used large amounts of mercury for their operations. Today, the facility is in a deteriorated state and categorized as a high-risk facility. OREM is taking steps to address risks near the facility by cleaning out the building's old, rusted Column Exchange (COLEX) equipment. So far, crews have retrieved more than 10,000 pounds of mercury, preventing a large environmental release. They have also removed all of the equipment on the west side of the structure, and are testing new technologies for future mercury cleanup.

Alpha 5, Beta 4 Legacy Material Disposition

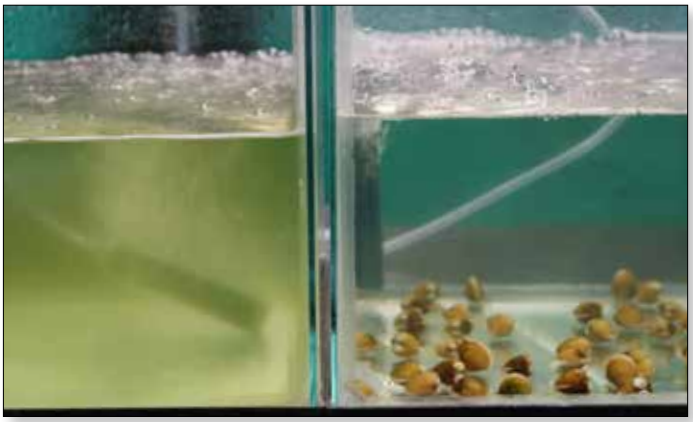
Alpha 5 and Beta 4 are some of the largest buildings at Y-12. Both were used for uranium processing and other operations. Significant cleanout activities concluded in 2012. The contents of the buildings included non-process equipment, containers, tools, and miscellaneous contaminated material. Characterization of building materials and equipment that was physically connected to the building was also completed. Removal of the buildings is complicated by their proximity to active facilities at the site and the fact that they are inside the site's protective security perimeter.

Biology Complex

Another major demolition project to change Y-12's appearance and movement toward modernization is the removal of a group of buildings that made up the Biology Complex. They were first used as part of the uranium enrichment process during World War II, but were later used for biological research. OREM has received funding specifically for this effort. In early 2018 two smaller buildings in the complex were demolished. In November 2020, OREM and cleanup contractor UCOR began demolition of the final remaining buildings in the complex, and demolition on those structures will be complete in 2021.

East Fork Poplar Creek (EFPC) and the Mercury Treatment Facility

Remedial actions have reduced mercury in EFPC significantly, but concentrations in the tissue samples of some species of fish are still above safe levels. In early 2019 OREM announced an expansion of its partnership with researchers at the ORNL Aquatic Ecology Laboratory to advance the understanding of mercury's impact on fish, wildlife, and streams. Scientists will also support OREM in developing



*ORNL researchers have discovered fresh water mussels can filter contaminated water, left, and make it clear as on the right.*

new technologies and remedial solutions.

Work started in 2017 on a treatment plant to remove mercury from Upper EFPC at its headwaters, which surface at a spot known as Outfall 200. The Mercury Treatment Facility will also safeguard against any further mercury released during D&D of facilities at Y-12 in the future. Site preparation began in December 2017, and construction began in 2019. The plant is scheduled to open in the mid-2020s. Efforts have also been made to purge mercury in a portion of the storm sewer system at Y-12 known as the West End Mercury Area. Steps are underway to capture as much water as possible for treatment before release to the public portions of Lower EFPC.

Bear Creek Valley

Waste management and disposal activities in Bear Creek Valley, mostly with waste generated from past uranium processing at Y-12, contributed to the contamination of the soils, surface water, and groundwater. Remediation efforts have significantly reduced the concentration and quantity of uranium and secondary contaminants in Bear Creek.

Bear Creek Burial Grounds (BCBG)
BCBG is located about two miles west of Y-12 and just west of EMWMF. From 1955 to 1993 the area was used for disposal of uranium turnings and industrial waste contaminated with uranium. To close the site, DOE installed a concrete blanket over the burial grounds to mitigate the risk posed by the shock-sensitive materials. DOE continues to monitor the site through groundwater sampling and address issues such as soil settling. More extensive remediation work will be required in this area. An initial draft of a plan to remediate BCBG was developed in 2008.

Environmental Management Waste Management Facility (EMWMF)
EMWMF is the on-site CERCLA waste disposal facility in Bear Creek Valley that accepts low-level radioactive and other hazardous wastes from OREM demolition activities. Not all waste goes to EMWMF. Waste that has no radioactive or hazardous components can go to one of three landfills just south of Y-12. Waste with higher levels of contamination is shipped off-site for disposal.

EMWMF has been expanded several times and is close to its capacity of 2.2 million cubic yards of material. This should be sufficient to finish ETTP cleanup and take some waste from other cleanup activities through the early- to mid-2020s, but is not enough capacity for OREM to complete cleanup at ORNL and Y-12.

Environmental Management Disposal Facility (EMDF)
A new facility, the EM Disposal Facility (EMDF) has a Proposed Plan that has been approved by DOE, EPA, and TDEC.

OREM began water and soil sampling at the preferred site, approximately one mile from EMWMF, in early 2018 and a draft proposal for public comment was released later that year. Board members should expect to see additional studies and documents related to the project during their terms. DOE would like to open the site prior to closure of EMWMF to ensure continuity of use. Construction of EMDF will allow OREM to complete its cleanup responsibilities at ORNL and Y-12.

## Stewardship

Stewardship activities on the ORR are followed by the EM & Stewardship Committee. The definition of stewardship as it relates to cleanup of radioactive/hazardous waste on the Oak Ridge Reservation is:

> *Acceptance of the responsibility and the implementation of controls necessary to maintain long-term protection of human health and the environment posed by residual radioactive and chemically hazardous materials.*

The definition was developed by the End Use Working Group. Through their work, Oak Ridge was one of the first sites to address the need for long-term stewardship of contaminated sites. Simply put, areas where contamination has been left in place after remediation must be continually monitored and protected to make sure that the contamination does not escape its confines or that humans do not disturb the area, which could lead to harmful personal or environmental exposure.

ORSSAB's mission related to stewardship was established in the Final Report of the Oak Ridge Reservation End Use Working Group and the Stakeholder's Reports on Stewardship, volumes 1 and 2 For more on the End Use Working Group, see Appendix B.

DOE is required to perform stewardship activities under several different agreements and internal directives. Once EM completes cleanup missions at sites, DOE transfers them to its Office of Legacy Management (LM), which was created in 2003. LM is responsible for ensuring that DOE's post-closure responsibilities are met and for providing DOE programs for long-term surveillance and maintenance, records management, work force restructuring and benefits continuity, property management, land use planning, and community assistance.

*Melton Valley is a large area near ORNL that was a waste repository for many years. Remediation was completed in 2006 but long-term stewardship is required due to the long-lived radionuclides that will be a human health and environmental concern for thousands of years.*

Specific Stewardship Functions and Controls

The success of stewardship is dependent on the activities that are conducted to ensure remediation remains effective, access and monitoring systems are functional, and that the necessary location and cautionary information is always accessible to the public.

In most cases where waste has been selected to remain in the ground on the ORR, land use controls must be conducted in perpetuity because of the long-lived radionuclides or other hazardous wastes that are being protected.

Physical controls are barriers that limit public access.

These include:

- Fences
- Natural barriers – trees, surface water, slopes, and buffer zones
- Warning signs and markers
- Security patrols

*A warning sign is one example of stewardship physical controls to protect the public from contaminated areas.*

Institutional controls are legal provisions such as ordinances, deed restrictions, and state and federal laws that control land uses. For more detailed information on institutional controls see the Stakeholder Reports on Stewardship.

Stewardship Information

Stewardship information includes the locations, amounts, and characteristics of residual contamination. Deed restriction information can be found in county land records offices after land parcels have been remediated. It can also be found in a Stewardship Map Reference Book, a companion piece to the Stewardship Map that ORSSAB helped develop. Information is also available on the DOE Oak Ridge Geographical Information System (emgis.oro.doe.gov) and the Oak Ridge Environmental Information System (ucor.com/oreis.html).

## The Six Elements of Stewardship

- Monitoring – regular sampling of all contaminated media to identify possible failure of physical controls and to continually understand the nature and extent of contamination
- Maintenance – regular upkeep of systems and controls to ensure long-term effectiveness
- Surveillance – regular oversight to ensure all necessary activities occur
- Enforcement – legal constraints to maintain protection of people and the environment
- Inspection and reevaluation – periodic review of systems to ensure continued need and effectiveness
- Public participation – involvement of the public to ensure citizen concerns are addressed and information is available

## Specific Areas Where ORSSAB is Interested in Stewardship:

**East Tennessee Technology Park**
When cleanup work is completed at ETTP, there should be little residual contaminated waste left at the site, but ORSSAB is interested in making sure the area is sufficiently cleaned up for new industry to relocate there with little or no need for stewardship by DOE. If there are remaining concerns at the site, DOE will always be responsible for them. However, there are roles that others will be responsible for if the area is available for industrial use, such as excavation permitting, underground utilities, and deed restrictions. For more information, see page 6.

**Bethel Valley**
An area of current stewardship concern is the Bethel Valley Burial Grounds Solid Waste Storage Area 3. SWSA 3 is not in the ORNL central campus and was cleaned up for recreational use. Stewardship controls will be put in place from this area westward to the Clinch River. For more information, see page 9.

**Melton Valley**
Melton Valley, in the southwest portion of the Oak Ridge Reservation, was used for a wide range of waste disposal methods for more than 50 years. Waste disposal areas included large solid waste dumps, pits, trenches, and waste injected into the earth's strata.

A large remediation effort was completed in 2006. OREM cleaned up some source areas and implemented protections for surface and groundwater from waste that was left in place. ORSSAB has a particular interest in making sure this area is well-protected from a stewardship standpoint because of the thousands of years that this waste will be an environmental and human health concern.

As previously mentioned, monitoring wells have been installed across the river from Melton Valley to detect any contamination leaving Melton Valley and moving off the ORR. For more information, see page 10.

*Monitoring wells were drilled on the west side of the Clinch River to determine if any contamination was migrating from DOE property into groundwater on private property*

**Bear Creek Valley**
Bear Creek Valley was used for disposal of uranium and associated waste from operations at Y-12 (see page 11). The only remaining, active waste management site in this area is EMWMF, which accepts low-level radioactive waste from cleanup and demolition projects across the Oak Ridge Reservation (see page 13).

Former waste disposal areas that have been remediated and closed include the Boneyard/Burnyard, the Oil Landfarm, and the S-3 Ponds. While remedial actions in years past have reduced contamination into nearby Bear Creek, contaminant levels in the creek near the Bear Creek Burial Grounds still do not meet water quality standards set by the state. Additional options are being considered to address portions of the valley to lessen the problem. For more information, see page 13.

While not in the immediate vicinity of the Bear Creek Burial Grounds, the White Wing Scrapyard is nearby. It also was used as a disposal area for scrap and debris from Oak Ridge plant operations. Surface debris removal was completed in 1994, but a significant volume of waste is buried at the site.

## Historic Preservation

Another part of stewardship is the responsibility to document the important activities of people in Oak Ridge, both during the Manhattan Project and in important research and development that followed. ORSSAB was asked by DOE to provide input on historic preservation options for the Oak Ridge Reservation. In response, ORSSAB cosponsored a meeting to gather input from the public on how best to preserve the historic significance of the K-25 Building. A recommendation followed. A follow-up recommendation offered input on a reservation-wide historical program that includes ORNL and Y-12.

The board was also active in an effort that led to the creation of an organization called the Center for Oak Ridge Oral History, which preserves the memories of those involved in the history of the City of Oak Ridge. Nearly 1,000 oral histories were collected as part of that effort.

ORSSAB is a consulting party to a memorandum of agreement for historic site interpretation at ETTP. The ORSSAB Stewardship Committee took the lead in commemorating the K-25 Building at ETTP, including the K-25 Virtual Museum launched in 2015 (k-25virtualmuseum.org) and the K-25 History Center, which opened in February 2020. The history center offers visitors 7,500 square feet of exhibits with more than 250 original artifacts on display. Nearly 1,000 oral histories were collected over a 10-year span from former Manhattan Project and Cold War-era workers that museum professionals used to develop the exhibits and interactive galleries to commemorate the history of K-25 and provide context for the way it fits into the national story.

The board continues to provide input and follow progress for local efforts on the Manhattan Project National Historical Park (nps.gov/mapr), which was created via an agreement between DOE and the National Park Service in 2015.

*Visitors explore the many exhibits and interactive displays in the K-25 History Center during the center's grand opening in February 2020.*

## Conclusion

We hope this introduction is helpful in giving you an initial understanding of the work on the ORR. You will learn more as you attend meetings, go on tours, travel to conferences, and participate in other board activities.

We encourage you to participate in the board's Facebook Page, facebook.com/ORSSAB; stay informed with our weekly email newsletter; and review activities in our quarterly newsletter, *The Advocate*. Back issues are available on our website, energy.gov/orssab.

Additional information is available in specific training materials for individual committees, as well as supplemental material (fact sheets, reports, histories, guidance, board bylaws, etc.). Contact board staff members or the board's Alternate Deputy Designated Federal Officer for any assistance.

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# Appendix A

## Board Officers, Deputy Designated Federal Officer, Liaisons

ORSSAB can have as many as 22 voting members. Through an application process they are chosen by DOE to reflect diversity of occupations, interests, gender, and race of persons living near the ORR. Technical expertise is not a requirement to be a member of the board.

Members are chosen to serve two-year terms, and they can serve a total of three terms. The officers include a chair, vice chair, and secretary. Officers are nominated at the board's annual planning meeting in August and are elected at the September meeting. The board's fiscal year is October through September and officers assume their seats at the October meeting. Officers can serve in a position for two years.

*Dave Adler*
*OREM division director*

**Deputy Designated Federal Officer (DDFO)**
Each FACA committee, like ORSSAB, is required to have a Designated Federal Officer (DFO) who works closely with the board. The DFO is based in Washington, DC, and is responsible for working with the nationwide EM SSAB.

The current DFO is David Borak. Since the DFO cannot attend all of the meetings of the individual SSABs, he has designated individuals at each site to be Deputy Designated Federal Officers (DDFO). The DDFO for ORSSAB is David Adler. Responsibilities of the DDFO include:

- Approve agendas and attend board meetings
- Ensure required records on board costs and memberships are maintained
- Certify the minutes of the meetings
- Ensure board meetings are publicly announced and accessible
- Inform the board of programs, projects, and activities directly affecting the board's mission and purpose
- Work closely with the board to prioritize issues
- Approve the annual work plan that includes goals and priorities
- Appoint an Alternate DDFO to assist in the management of the SSAB and supporting activities.

*Melyssa Noe*
*OREM branch chief*

**ORSSAB Alternate Deputy Designated Federal Officer**
As noted above the DDFO often appoints an Alternate DDFO to work closely with the board. Melyssa Noe is the board's Alternate DDFO and its first point of contact with OREM. You will see her at all board and committee meetings. The Alternate DDFOs' responsibilities include many of those listed for the DDFO above. In addition:

- Assist in the management of the board, provide guidance, and support its activities
- Ensure board presentations are developed and provided
- Facilitate membership appointments
- Ensure FACA requirements are met and provide annual FACA report to DOE Headquarters
- Facilitate board member training and travel needs
- Ensure that DOE responds to recommendations and track action items
- Provide oversight of members' conflict of interest issues

*Connie Jones*
*EPA*

*Kristof Czartoryski*
*TDEC*

*Jay Mullis*
*OREM manager*

*Laura Wilkerson*
*OREM deputy manager*

**Agency Liaisons**
In addition to the DDFO and alternates, the board has several agency liaisons from DOE, EPA, and TDEC. The agency liaisons attend the board meetings but do not vote. Their responsibilities include: Providing agency opinions on EM issues, recommending board topics and prioritization, and participating in board discussions

Connie Jones is the standing liaison from EPA and Kristof Czartoryski represents TDEC with the board. Other members of those organizations may fill in from time to time based on need or a particular expertise.

Likewise, while David Adler serves as the Board's official liaison, other DOE leadership may also present to the board. You are likely to meet Jay Mullis, OREM manager and Laura Wilkerson, OREM deputy manager.

# Appendix B

## Important Documents and Publications

There are a number of documents and publications that are the foundation for ORSSAB's existence and mission. The following are the main instruments that set the stage for ORSSAB's work:

Federal Advisory Committee Act Charter
As mentioned earlier the EMSSAB is chartered under the Federal Advisory Committee Act (FACA). For more about EMSSAB, see the separate tab in your binder. Under that umbrella organization operate eight local (site specific) boards in Idaho, Kentucky, Nevada, New Mexico, Ohio, South Carolina, Tennessee, and Washington State. These local boards exist as long as work needs to be done. In places where work has been finished site specific boards have been disbanded.

Local site board membership is composed primarily of people who may be directly affected by the need for site cleanup. Members may include stakeholders from local governments, environmental and civic groups, labor organizations, universities, industry, and other interested citizens.

Under the FACA charter, at the request of the DOE Assistant Secretary for EM or the Field Managers, the EMSSAB (and the site specific boards like Oak Ridge) may provide advice and recommendations concerning the following EM site-specific issues:

- Cleanup standards and environmental restoration;
- Waste management and disposition;
- Stabilization and disposition of non-stockpile nuclear materials;
- Excess contaminated facilities;
- Future land use and long-term stewardship;
- Risk assessment and management;
- Cleanup science and technology activities.

ORSSAB was chartered under FACA in 1995 and the charter is periodically renewed. Each board is organized under its own bylaws (see next page), which must remain in compliance with FACA.

The Federal Facility Agreement

In 1992 the Federal Facility Agreement (FFA), a CERCLA-required cooperative agreement among DOE, EPA, and TDEC was initiated. The agreement promotes cooperation and participation of the three parties in cleaning up the reservation. Full text of the FFA is available at www.ucor.com/RegAgreements.html.

DOE Oak Ridge is responsible for ensuring the provisions of the FFA are carried out. EPA and TDEC (the regulators) make sure DOE carries out its responsibilities. The main point of the agreement is to ensure that past and present environmental impacts to the ORR are investigated and appropriate remedial actions are taken to protect individuals and the environment. The FFA also establishes a framework and schedule for developing, implementing, and monitoring response actions.

The FFA has a number of appendices. The two you will hear referenced often are Appendices E and J. Appendix E is the list of all milestones that DOE, EPA, and TDEC have agreed to be reached during the current fiscal year and the next two fiscal years. These milestones could be the submission of required documentation or the initiation of field work. The milestones in Appendix E are enforceable; DOE must reach those milestones or risk being penalized by the regulators. Appendix J is a list of planning targets the FFA parties have agreed to for years beyond those stated in Appendix E. These targets are not enforceable and can be modified as conditions change. When the current fiscal year ends (September 30), the milestone targets in the next fiscal year in Appendix J roll into Appendix E on October 1 and then those milestones become enforceable.

Making cleanup decisions is a constant negotiation process among the FFA parties that is based on funding, budget targets, risk, technical challenges, availability of resources, and many other factors, including board recommendations. ORSSAB is kept well-informed of work planned or being done by DOE. Each year ORSSAB develops a work plan to get more information about projects on the reservation. The board can use that information to develop recommendations to DOE.

End Use Working Group (EUWG)

In 1996 DOE asked ORSSAB to initiate a process to gain a better understanding of what the community wanted regarding future use of contaminated areas of the ORR. In response, ORSSAB formed the End Use Working Group (EUWG) in 1997, which was composed initially of about 100 citizens concerned with the need to clean up the site. About 20 community volunteers finished the work 16 months later.

*The End Use Working Group was charged with developing recommendations for final uses of the ORR and determining community values that would be used to guide DOE's remedial action decision-making process. The group's final report was published in 1998.*

They were tasked with:

- Making recommendations for end (final) uses of contaminated areas of the ORR
- Determining community values that would be used to guide DOE's remedial action decision-making process

The recommendations of the EUWG were to identify preferences for the future of contaminated areas following remediation. These preferences were developed to guide the decision-making process with end-use goals for remediation but with no intent to identify specific remediation levels or technology or to contradict existing laws or regulations.

The EUWG developed a number of community guidelines for contaminated land and water for DOE to use in making future use decisions. Fourteen guidelines for contaminated land and five for contaminated water were written. The land guidelines were ranked in order of importance, while the water guidelines were of equal importance.

In addition to the guidelines for DOE to follow in making end-use decisions, the EUWG wrote several specific recommendations to DOE. A more detailed look of the EUWG's work is available in the report.

***Stewardship***

The EUWG recognized that if DOE implemented its recommendations significant amounts and levels of radioactive and chemical contaminants would have to be managed in place or moved to a different disposal facility. Transportation off the reservation to another facility was deemed too expensive, potentially risky, and politically difficult because few places want to receive radioactive mixed waste. Because the decisions that this group was supporting would result in contamination remaining on the reservation, the EUWG could not endorse any remediation program without assurance of long-term care for waste remediated in place. As a result, the EUWG formed a Stewardship Committee to develop detailed stewardship recommendations, which produced two reports on stewardship.

<u>Stakeholder Report on Stewardship</u>

In July 1998, the Stewardship Committee produced the first of two reports on stewardship – the Stakeholder Report on Stewardship. The report described the need for a stewardship program and the basic elements it should have.

<u>Stakeholder Report on Stewardship, Volume 2</u>

In 1999 the Stewardship Working Group, which was the result of a recommendation made in the first Stakeholder Report, published a second volume on stewardship.

The work of the Stewardship Working Group in the second Stakeholder's report was based on the earlier work, but the basic elements and unresolved issues in the first report were more fully developed in the second report. Unresolved issues included more explicit treatment of stewardship in CERCLA documents, five-year reviews, and the role of the community with regard to oversight of stewardship.

Basically, the second report went into more detail in the execution of stewardship activities and the roles of the stewards and the public.

Each of the above documents may be viewed at the DOE Information Center or requested digitally.

**Environmental Management Site-Specific Advisory Board**
U.S. Department of Energy

Advisory Board Charter

1. **Committee's Official Designation.** Environmental Management Site-Specific Advisory Board (EM SSAB).

2. **Authority.** This charter establishes the Board under the authority of the U.S. Department of Energy (DOE). The Board is being renewed in accordance with the provisions of the Federal Advisory Committee Act (FACA), as amended, 5 U.S.C., App. 2.

3. **Objectives and Scope of Activities.** The EM SSAB provides the Assistant Secretary for Environmental Management (EM), the appropriate DOE Field Managers or Assistant Managers for EM activities, and any other DOE official the Assistant Secretary designates, with advice and recommendations concerning issues affecting the EM program at various sites. At the request of the Assistant Secretary or the Field Managers, the Board may provide advice and recommendations concerning the following EM site-specific issues: clean-up standards and environmental restoration; waste management and disposition; stabilization and disposition of non-stockpile nuclear materials; excess facilities; future land use and long-term stewardship; risk assessment and management; and clean-up science and technology activities. The Board may also be asked to provide advice and recommendations on any other EM project or issue.

4. **Description of Duties.** The duties of the Board are solely advisory in nature.

5. **Official(s) to Whom the Committee Reports.** The Board reports to the Assistant Secretary for Environmental Management, the appropriate DOE Field Managers or Assistant Managers for EM activities, and any other DOE official the Assistant Secretary shall designate.

6. **Agency Responsible for Providing Necessary Support for this Committee.** The Department of Energy. Within the Department, primary support shall be furnished by the Office of Environmental Management.

7. **Estimated Annual Operating Costs in Dollars and Staff Years.** The estimated annual costs associated with supporting the EM SSAB are $4.25 million, including 10.0 staff years (FTE) of Federal employee support.

8. **Designated Federal Officer.** A full-time or permanent part-time DOE employee, appointed in accordance with agency procedures, will serve as Designated Federal Officer (DFO). The DFO (or designee) will approve or call for all of the Board and subcommittee meetings, prepare and approve all meeting agendas, attend all Board and subcommittee meetings, and adjourn any meeting if adjournment is determined to be in the public interest.

   The DFO may designate Deputy Designated Federal Officers (DDFOs) to be responsible for conducting day-to-day operations of the local site chapters of the EM SSAB (also known as "local boards").

9. **Estimated Number and Frequency of Meetings.** Local board meeting schedules vary by site. Depending on the level of current clean-up activity, DOE site management may convene the full local boards on a monthly basis, or less frequently. Additionally, members representing each local board attend semi-annual EM SSAB Chairs meetings to discuss complex-wide EM issues.

10. **Duration.** Continuing in nature.

11. **Termination.** The Board terminates two years from the Charter filing date and may not meet if the Charter is not renewed biennially.

12. **Membership and Designation.** Pursuant to delegated authority by the Secretary of Energy, the Assistant Secretary for Environmental Management is authorized to appoint and remove EM SSAB members.

    a. The standard term for Board members is two years, and members are to serve no more than three two-year terms for a total of six years.
    b. Exceptions from term limits can be requested and will be considered on a term-by-term basis if a member represents a specific organization on the board or where a member brings diversity that is important to balance board views. A request for an exception from term limits may be made by the affected Field Office Manager during the membership package process and must be approved by the Assistant Secretary.
    c. Board member appointments are staggered so that one-half of the membership is retained for continuity.
    d. Board membership shall reflect a full diversity of viewpoints in the affected community and region, and will be composed primarily of people who are directly affected by DOE site clean-up activities.
    e. Members shall be appointed to bring views associated with residence or employment in various affected communities within the clean-up area and/or views associated with community, governmental (including Tribal Nations), environmental or public health groups, civic groups, labor organizations, local educational institutions, and/or businesses and other organizations within the affected areas. The Assistant Secretary or DOE Field Managers may request that other Federal, State, or Tribal organizations name liaisons to the local boards to provide information and represent their agency's interests at local board meetings. These liaisons may participate in discussions, but shall have no voting privileges and shall not be included in the quorum count.
    f. Nomination and appointment of Board members shall be accomplished using procedures designed to ensure a diverse Board membership and a balance of representative viewpoints.
    g. Approximate number of members: 200
    h. Members of the Board serve without compensation; however, each member may be reimbursed in accordance with the Federal Travel Regulations for authorized travel and per diem expenses incurred while attending Board meetings.

13. **Subcommittees.** DOE has the authority to form subcommittees. Subcommittees may be formed for each local site chapter of the EM SSAB with the approval of the DFO or DDFO. The objectives of the subcommittees are to make recommendations to the full local board with respect to particular matters which are related to the responsibilities of the full local board. Such subcommittees or workgroups may not work independently and must report

their recommendations and advice to the full local board for deliberation and discussion. Subcommittees have no authority to make decisions on behalf of the local board, nor can they report directly to DOE.

14. **Recordkeeping.** The records of the Board shall be handled in accordance with General Records Schedule 6.2 and Administrative Records Schedule 16, Item 8b (1.1), and approved agency records disposition schedule. These records shall be available for public inspection and copying, subject to the Freedom of Information Act, 5 U.S.C. 552.

15. **Filing Date.**

Date filed with Congress: April 11, 2018

Wayne D. Smith
Committee Management Officer

# Oak Ridge Site Specific Advisory Board

# BYLAWS

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## I. MISSION

The mission of the Oak Ridge Site Specific Advisory Board (ORSSAB) is to provide informed advice and recommendations concerning site specific issues related to the Department of Energy's (DOE's) Environmental Management (EM) Program at the Oak Ridge Reservation. In order to provide unbiased evaluation and recommendations on the cleanup efforts related to the Oak Ridge site, the Board seeks opportunities for input through collaborative dialogue with the communities surrounding the Oak Ridge Reservation, governmental regulators, and other stakeholders.

## II. FUNCTIONS, SCOPE, AND ACCOUNTABILITY

**A. Functions:** At the specific request of EM, the Board will provide independent advice and recommendations to the Assistant Secretary for EM, the DOE Oak Ridge Office (ORO) Manager, or the DOE ORO Assistant Manager for EM. The Board will provide advice and recommendations in response to charges issued by EM or the Site Manager.

**B. Scope:** The scope of the Board includes:

1. The opportunity for the Board to discuss with EM their proposals and plans for such matters as EM facility expansions and closings, environmental projects, and the impact of environmental regulations; and
2. Any aspects of EM issues related to cleanup standards and environmental restoration, waste management and disposition, stabilization and disposition of non-stockpile nuclear materials, excess facilities, future land use and long-term stewardship, risk assessment and management, and cleanup science and technology activities.

**C. Accountability:** The Board interacts with the appropriate EM decision makers to provide advice on matters within its scope, on behalf of the citizens of Oak Ridge and the surrounding communities.

1. The Board seeks a free and open two-way exchange of information and views between Board members and EM, where all are invited to speak and to listen.
2. Board members may request access to independent technical advice, staff, and training.
3. The Board will develop specific operating procedures and undergo requisite training to ensure that all members will hear a wide range of views and use constructive methods for resolving conflict, making decisions, and dealing with the differing viewpoints.
4. The Board will always remain accountable to the public and EM, and seek to promote multicultural community involvement. The Board will develop culturally appropriate procedures to ensure public participation in EM's decision-making processes.
5. In compliance with the Federal Advisory Committee Act, Board meetings will be open to the public, and the Board will give advance notice of a minimum of 15 days. Board meetings will be held at regular times in public locations to encourage maximum public and Board participation.

6. EM will always remain mindful of the various stakeholder interests represented on the Board. It will seek to ensure that all interested parties and stakeholders continue to be adequately and equitably represented.
7. The Board members will send all requests to the EM Deputy Designated Federal Officer (DDFO) to ensure a prompt response. The DDFO is responsible for tracking DOE responses to requests from the Board and ensuring the completeness of those responses.
8. Site Specific Advisory Boards are jointly chartered as the EM Site Specific Advisory Board under the Federal Advisory Committee Act. The Board is thereby subject to the requirements of the EM Site Specific Advisory Board Charter, the Federal Advisory Committee Act (5 USC Appendix), and Federal Advisory Committee Management Requirements (41 CFR 101-6).
9. The Board shall develop and publish an Oak Ridge–specific annual report and seek stakeholder input and develop a general work plan each year based on the Board's charge to guide the Board and its committees' activities.
10. The Board will also maintain a repository of the Oak Ridge Board documents.

## III. MEMBERSHIP

**A. Authority:** Pursuant to delegated authority, the Assistant Secretary for EM is authorized to appoint and remove EM SSAB members.

**B. Terms of Office:** The Board shall consist of not more than 22 voting members. Two non-voting student representatives identified each year by area high schools will participate in Board activities for one year. The Board membership is on a rotation schedule that will encourage new individuals to participate and will maintain a balance between continuity and diversity inherent in the makeup of the Board.

1. Terms of office will be two years.
2. Members may serve three terms for a total of six years.
3. If after significant recruitment efforts, it is found that the member pool is limited, a request for an exception from term limits may be made by the affected Field Manager to the Assistant Secretary.

**C. Vacancies:** As soon as a vacancy exists following completion of a Board member's term, resignation, or removal, Board members, members from the Oak Ridge communities at large, or individuals who work in the Oak Ridge area may be considered to fill the vacancy. Nominees should meet, as far as possible, the Board's existing stakeholder balance, diversity, and geographical distribution. The DDFO shall forward his/her recommendations to the Office of EM in DOE Headquarters for approval. When a vacancy exists due to resignation or removal of a Board member, the vacancy shall be filled by interim appointment for the remainder of the unexpired term in accordance with the DOE EM Site Specific Advisory Board Guidance.

## IV. MEMBERSHIP RESPONSIBILITIES

**A. Board Commitments:** Board members make the following commitments:

1. To attend regular meetings and receive training;
2. To review and comment on EM and other documents within their purview that come before the Board, and submit timely recommendations to EM;
3. To be available for committee work between Board meetings, and to participate fully in the affairs of the Board;
4. To work collaboratively and respectfully with other Board members and liaisons in the best interests of both the Board and the public;
5. To represent accurately all matters before the Board;
6. To handle in a responsible manner information and materials provided by the agencies, particularly drafts developed for an agency's in-house use, that might have significant future revisions as part of the agency's working practices;
7. To share any written communication about or for Board activities with the Board as a whole and with the DDFO;
8. To act for the Board or as its representative only with the majority vote of the Board;
9. To serve on at least one committee or task force during any given twelve month period as appointed by the Chair; and
10. To abide by the terms and conditions of the EM SSAB Charter and these bylaws.

**B. Liaison Commitments:** The Board requests that liaisons make the following commitments:

1. To define and communicate clearly to the Board the respective decision-making processes of the agencies they represent;
2. To provide timely access to information pertinent to EM and associated environmental issues and related decision making;
3. To inform the Board in a timely and proactive manner of agency processes, programs, projects, and activities pertinent to the Board's mission and purpose.

## V. BOARD STRUCTURE

**A. Chair, Vice Chair, and Secretary:** The Board will elect by majority vote, a Chair, Vice Chair, and Secretary, who will ensure that a diversity of viewpoints are considered in all Board discussions. It is preferred that candidates for the office of Chair have previous experience on the Executive Committee to better facilitate the function of said committee. The Chair will support the Board in a balanced and unbiased manner, irrespective of any personal views on a particular issue and see that all Board members have the opportunity to express their views.

1. The election for Chair, Vice Chair, and Secretary will be held before the first meeting of the fiscal year. The terms of the Chair, Vice Chair, and Secretary will be one fiscal year.
2. The Chair will serve as liaison with the Federal Coordinator, support staff, and facilitator(s), assisting in the preparation of the agendas, minutes of the meetings, and other necessary arrangements.
3. The Chair certifies to the accuracy of all minutes.

4. The Chair signs the certification of a recommendation that the Board has passed by consensus/majority. If consensus/majority is not reached, the Chair may refer the matter back to a committee or sign and send to DOE the majority and minority reports.
5. The Chair assures necessary administrative support for the committees and task forces, and requests DOE support through the DDFO.
6. The Chair shall recommend appointment of members of task forces to the DDFO and ensure that the membership of the committees and task forces reflects the diversity of the Board to the extent practicable.
7. The Chair serves between regular meetings of the Board as contact for EM, interest groups, and the general public.
8. The Vice Chair serves as Chair in the absence or incapacity of the Chair.
9. The Secretary shall:
   - **a.** Assume the duties of the Vice Chair in his/her absence or disability;
   - **b.** Work with administrative staff to give due notice to DOE, Board members, and the public of all Board and committee meetings;
   - **c.** Keep full and accurate records of the proceedings of the Board and committee meetings (including attendance), with assistance from administrative staff;
   - **d.** Notify the Executive Committee of any member with two consecutive absences from regularly scheduled Board meetings;
   - **e.** Review minutes of Board meetings with the administrative staff for timely distribution to Board members; and
   - **f.** Work with the DOE Federal Coordinator, administrative staff, and any designated committee to review an annual report and an annual work plan. The Board year begins October 1.
   - **g.** Prior to any vote, provide a status of members present to verify whether a sufficient quorum exists for recommendations.
10. The Chair, Vice Chair, and Secretary will have other duties as assigned by the Board.
11. In the absence of the Chair, Vice Chair, and Secretary, the immediate past Chair, if that person still serves on the Board, shall serve as Chair of the Board meeting. In the absence of the immediate past Chair, the immediate past Vice Chair, if that person still serves on the Board, shall serve as Chair of the Board meeting. If none of these persons is present, those Board members present shall select, with the approval of the DDFO, a Chair for the meeting.
12. No officer of the Board shall serve more than two consecutive years in the same office.

**B. Committees:** The Board will establish its committees prior to the beginning of each fiscal year to reflect the Board's approved work plan for that year.

**C. Other Committees and Task Forces:** The Board may establish ad hoc committees or task forces as it deems necessary.

**D. Structures of Committees, Ad-hoc Committees, and Task Forces:**

1. Membership on committees will be on a volunteer basis, and Board members must serve on at least one committee.
2. Committee members may develop additional operating procedures consistent with the bylaws.
3. Committees may not directly submit recommendations to EM. They are solely responsible for producing draft proposals or information for the full Board. Before presenting a recommendation to the Board, the committee should have passed the recommendation by majority vote of the members attending the meeting.
4. The committees will meet independently of the Board. If the meetings of the committee are open to the public, they must hold them in public locations after appropriate notice.
5. If a written summary of the committee meetings is prepared, the Chair of the committee will provide it to the Board.
6. Election of the Chair for the committees will occur annually, or as necessitated by vacancies. Standing committees may, at their discretion, internally select, elect, appoint, or remove committee Co-Chair or Vice Chair (either title bearing the same intended meaning), from among only the properly appointed Board members of the committee. Co-Chairs or Vice Chairs shall serve and act in the temporary absence of the duly elected committee chairperson.
7. Committee Chairs shall notify the Board Chair and the DDFO of the selection, election, appointment, or removal of any standing committee Co-Chair or Vice Chair.
8. Except for the Nominating and Executive committees, non-Board members shall be allowed to vote in committee meetings but shall not hold Committee leadership positions.
9. Ad-hoc committees and task forces shall be established by the Board for the purpose of investigating special topics. The charge to, Board membership of, and Chair of the ad-hoc committees and task forces shall be established by the Board and approved by the DDFO. The Board shall establish the charge to, term of, and reporting requirements of each ad-hoc committee and task force.
10. Ad-hoc committees and task forces shall be confirmed by the Chair, upon recommendation of the Chair of the respective committee, ad-hoc committee, or task force. Members of the public may be allowed to participate on a non-voting basis for any ad-hoc committee except for the Nominating Committee. The DDFO shall concur in all recommendations for participation by non-Board members.

**E. Executive Committee:** The Board has an Executive Committee consisting of the Chair, Vice Chair, Secretary, and Chairs, Co-Chairs, or Vice Chairs of the various standing committees established during the fiscal year. The Executive Committee shall meet at least bimonthly and may hold other meetings at the call of the Board Chair to consider matters of importance that may require immediate resolution. The DDFO or the DDFO designated SSAB Federal Coordinator shall serve as a non-voting member of the Executive Committee.

1. During the intervals between Board meetings, decisions involving the daily business operations of the Board (e.g., setting budgets and agendas, coordinating committee

requirements and activities, etc.) shall be made by majority vote of the Executive Committee. However, this committee shall have no authority to set Board policy or make any recommendations to EM.

2. Actions on routine general administrative matters requiring time-critical action by the Executive Committee may be handled by polling members of the Executive Committee through any quick means of communication. Decisions will be validated by the Board Chair and documented in the minutes of the next regularly scheduled Board meeting.

3. The Executive Committee shall have no authority to act for the Board on any motion or recommendation that affects a decision made by the full Board. Any motion or recommendation affecting a decision of the Board shall be submitted by the Executive Committee to the Board for consideration at the next regularly scheduled Board meeting.

**F. Work Sessions:** Work sessions are defined as meetings of the Board, including ex officio members, at which official action may not be taken. They must, however, be formally advertised, to be in compliance with the Federal Advisory Committee Act.

**G. Executive Session (Closed Session):** Upon approval of the Secretary of Energy, the Board shall announce fifteen days in advance of the meeting an Executive Session for matters concerning litigation or private personnel matters.

**H. Removal of Board Officers:** An officer of the Board (Chair, Vice Chair, Secretary, or standing committee Chair, Vice Chair, or Co-Chair), may be removed from their office for misconduct or neglect of duty by a vote of the Board upon the recommendation of the Executive Committee, the recommendation of the DDFO, or a duly authorized motion tendered by a Board member at a regularly scheduled Board meeting.

**I. Replacement of Officers:**

1. A Board office vacancy (Chair, Vice Chair, or Secretary) that comes into existence will be announced at a regularly scheduled Board meeting.

2. An election by the entire Board will be held at the next regularly scheduled Board meeting after the meeting at which the vacancy was announced. In the event of a removed, resigned, or abandoned vacancy in the Chair, Vice Chair, or Secretary, the term of office of any interim replacement election for the Chair, Vice Chair, or Secretary shall expire on September 30$^{th}$ and the regularly scheduled annual election shall be held as provided in Article V, Section A, Number 1.

3. If both the Chair and Vice Chair become vacant at or near the same time, then the Board shall, at the meeting at which the vacancy is announced, elect by majority vote a Chair and Vice Chair to serve the Board until, and at, the next regularly scheduled Board meeting. To prevent delay in Board work, and in the absence of a timely interim election, the Executive Committee shall appoint, subject to DDFO approval, an Acting Chair and Vice Chair (if needed or desired), from among the voting members of the Executive Committee, to serve the Board until the next regularly scheduled Board meeting.

## VI. DECISION MAKING

All Board decisions relating to recommendations and advice to DOE shall be reached through parliamentary procedure. The Board shall strive for substantial agreement among Board members for approval of recommendations and advice to DOE.

**A. Quorum for Meetings:** For the purpose of conducting business, a quorum shall be a simple majority of the membership of the Board or Executive Committee.

**B. Approval of Recommendations:** Recommendations shall be approved by majority vote of the entire Board membership.

**C. Proxy Voting:** Voting by proxy on any Board or committee action is prohibited.

**D. Bylaws Amendments:** These Bylaws may be amended at any regular meeting of the Board by a majority vote of the entire Board membership, provided that the proposed amendment was submitted in writing and read at a previous regular business meeting. (Also see Section XII.)

**E. Removal of Officers:** An officer of the Board may be deposed from office for misconduct or neglect of duty in office by a two-thirds vote of the Board.

**F. Requirements for Recommendations to EM:**

1. Standing committees, the Executive Committee, or individual members may propose recommendations to the Board.
2. Proposed recommendations must be in writing.
3. Proposed recommendations will be included in Board packets or be made available to members prior to the Board meeting, along with supporting background documentation.
4. Proposed recommendations will be discussed at Board meetings and will be approved, rejected, or returned to committees for further work (e.g., editing, refinement, and incorporation of public and/or members' comments).
5. Proposed recommendations will be introduced as motions for Board approval.
6. When an issue comes before the Board, the Chair may refer the issue to the appropriate standing committee or create an ad-hoc committee for that issue. The standing committee or ad-hoc committee will report progress to the Board at the next meeting.
7. Board members who disagree with an approved recommendation should document it in writing.
8. When it appears that the Board has reached agreement on a particular recommendation, the Chair may call for a vote.
9. Recommendations dealing with complicated and/or controversial issues may require more than one draft and may take two or more months to evolve into a form that is acceptable by a majority of the Board.

**G. Administrative Decision Making:**

1. Administrative functions of the Board may be delegated to the Chair who may assign actions to the Federal Coordinator and/or his/her staff.

2. If the Board finds need to review or affirm specific decisions made under the authority delegated to the Chair, such affirmation will be expressed by a majority vote of the Board at the next meeting.

**H. Procedures and Parliamentary Law:** The current edition of "Robert's Rules of Order" shall apply on all questions of procedures and parliamentary law not specified in these bylaws.

## VII. ROLE OF THE FACILITATOR

A professional facilitator may be hired to help the Board organize its work, prepare an agenda based on consultations with the Board and the Chair, facilitate the Board meetings, and work with the staff to prepare the minutes of the meetings.

## VIII. CONDUCT AND FORMAT OF MEETINGS

**A. Meeting Format:**

1. Public notices will be printed in the Federal Register at least fifteen (15) days before the meeting. Announcements may be made on the radio and in local newspapers.
2. The Board will meet as needed, with the length of meetings determined by the agenda.
3. The Board will submit its agenda for the approval of the DDFO. In preparing the agenda, the Board reviews its work plan and, if appropriate, obtains additional input from its members and committees and the public.
4. Meetings will be open to the public; a section of the meeting room will be set aside for observers; and public comment is invited at appropriate times during a meeting.
   - **a.** There will be a fixed agenda time for public comment. A non-recused Board member may not address the Board during the time set aside for public comment. The public comment period may be extended by the Chair or by consensus of the Board members in attendance.
   - **b.** If required, at the discretion of the Chair, the fixed time will be divided equally among the members of the public who request to speak.
   - **c.** Before a decision on a recommendation is made, the Chair may invite members of the public to offer their input. The Board will determine in advance how much time they will allocate for public input.
   - **d.** Members of the public may offer their comments in writing and give them to the DDFO.
   - **e.** Time will be set aside for Board member comments during each meeting.
5. Any meeting will be set up in terms of both the physical arrangements and the agenda to facilitate hearing and discussion.
6. Minutes of the meetings will be kept by an individual designated by the Chair, distributed to the Board members for their review and made available to the public. Each meeting agenda will include the opportunity for members to make revisions to the minutes of the previous meetings.

The Chair or Vice Chair must approve the minutes within 90 calendar days of the meeting to which they relate. In the absence of the Chair or Vice Chair the DDFO must make such certification.

7. Any product of the Board, such as policies, positions, reports, advice or recommendations given to DOE, must be reviewed by the Board in final distribution form before distribution and being placed in the DOE public reading rooms and any other places deemed appropriate.

**B. Conduct of Meetings:**

1. The Board may utilize a neutral third party facilitator to assist it in accomplishing its mission. In all instances the facilitator will operate in a completely neutral, balanced, and fair manner.
2. Board members will show respect to each other, EM, liaisons, and the public.

## IX. BUDGET

1. **Authority:** Funding amounts will be determined yearly based on the Board's approved work plan and availability of funds. The DDFO retains the fiscal responsibility for the Board but may assign a fiscal agent acceptable to EM.
2. **Compensation:** Board members will serve without compensation but may receive reimbursement for direct expenses related to the work of the Board and meeting attendance.
3. **Travel Expense:** Board, committee, and task force members are required to follow applicable federal travel regulations. All travel expenses must be submitted to the Federal Coordinator for reimbursement according to Federal guidelines. Trip reports by Board members must be prepared within 30 days and submitted to the support staff for inclusion in the Board's records.

## X. EVALUATION

**A.** The Board may submit questions or concerns about the board or the responsiveness of OREM to recommendations and other questions at any time without the formation of a committee.

## XI. CONFLICT OF INTEREST

**A. Definition:** Board members are prohibited from personally and substantially participating as a Board member in any particular matter in which the Board member or the Board member's spouse, minor child, general partner, or employer has a financial interest. This restriction also applies if the Board member is negotiating or has any arrangement concerning prospective employment with any person or organization that has a financial interest in any particular matter before the Board.

**B. Enforcement of Conflict of Interest Policy:** Questions concerning conflict of interest shall be referred to the DDFO and/or the Federal Coordinator, who will seek the advice of legal counsel for resolution.

**C. Recusal:** If a Board member is aware of a conflict of interest, as defined above, the member shall immediately inform the DDFO and the Board of the interest and shall refrain from participating in discussions and recommendations in which a conflict or potential for conflict of interest exists.

**D. Principles of Conduct:** Board members shall abide by the following conflict of interest principles:

1. Members shall refrain from any use of their membership, which is or gives the appearance of being motivated, by the desire for private gain.
2. Members shall not use, either directly or indirectly for private gain, any inside information obtained as a result of Board or committee service.
3. Members shall not use their positions in any way to coerce, or give the appearance of coercing, another person to provide a financial benefit to the member or any person with whom the member has family, business, or financial ties.
4. Members shall not knowingly receive or solicit from persons having business with DOE anything of value as a gift, gratuity, loan, or favor while serving on the Board or in connection with such service.

   **a. Exceptions**:

   Members may receive an unsolicited gift from persons having business with or an interest in DOE if:

   i. The gift has an aggregate market value of $20 or less per occasion, provided that the aggregate market value of the individual gift received from any one person under the authority of this paragraph shall not exceed $50 in a calendar year;

   ii. The gift is motivated by a family relationship or personal friendship rather than a member's position; and

   iii. The gift results from the business or employment relationship of a member's spouse or the outside business or employment activities of a member when it is clear that such gifts are not enhanced because of the member's position.

## XII. AMENDING THE BYLAWS

**A. Policy:** The Board shall have the power to alter, amend, and repeal these bylaws in ways consistent with the Amended Charter of the EM Site Specific Advisory Board, and other applicable laws, regulations and guidelines. Any member of the public, the Board, or one of the Agencies may propose an amendment. However, to be considered by this Board the proposed amendment must be sponsored by a Board member. The bylaws may be amended at any regular meeting of the Board by a majority vote of the entire Board membership, provided that the proposed amendment was submitted in writing and read at a previous regular business meeting.

**B. Approval:** All amendments to these bylaws must be approved by the Designated Federal Officer in consultation with the Office of General Counsel.

## XIII. ADOPTION OF THE BYLAWS

**A.** These bylaws will be effective:

1. Upon the affirmative vote of the Board membership,
2. Execution by the Chair,
3. Review and approval by the DOE Office of the General Counsel, and
4. Approval of the EM SSAB Designated Federal Officer.

**B.** All previous bylaws or procedures are hereby rescinded.

## XIV. SUBORDINATION AND SEVERABILITY OF THE BYLAWS

If a conflict arises with respect to any provision of these Bylaws and federal statutes, the laws of the state of Tennessee, or federal or state regulatory authority, then the superseding law or regulation shall control. In the event that any provision of these bylaws is invalid, such invalidity shall not affect the remaining provisions that shall continue in full force and effect.

*APPROVED: November 14, 2007*

*REVISED: April 10, 2019*

# Summaries of the Final Report of the End Use Working Group and the Stakeholder Reports on Stewardship

## Summaries of the Final Report of the End Use Working Group and the Stakeholder Reports on Stewardship

In 1989 the Oak Ridge Reservation (ORR), which includes the main plants of the Oak Ridge National Laboratory (ORNL), the Y-12 National Security Complex, and East Tennessee Technology Park (formerly the K-25 Gaseous Diffusion Plant), was placed on the Environmental Protection Agency's National Priorities List for cleanup (also known as Superfund).

In 1995, the Department of Energy established the Oak Ridge Site Specific Advisory Board (ORSSAB) to serve as the citizens' advisory group to the department on its Oak Ridge Environmental Management Program to clean up the reservation of legacy radioactive and hazardous waste left over from operations at Y-12, ORNL, and K-25.

In 1996 DOE asked ORSSAB to initiate a process to gain a better understanding of what the community wanted regarding future use of contaminated areas of the ORR. To address the department's request the board in 1997 formed the End Use Working Group (EUWG), which was composed of about 20 community volunteers and tasked with developing:

- Recommendations for end uses of contaminated areas of the ORR
- Determining community values that would be used to guide DOE's remedial action decision-making process

EUWG deliberations determined that additional issues needed to be evaluated, including:

- The relationship of the use of contaminated groundwater and surface water to recommended end uses of contaminated areas
- The need for a long-term stewardship program when an end use recommendation resulted in residual contamination
- The need for an on-site waste disposal facility

The recommendations of the EUWG were to identify preferences for the future of contaminated areas after remediation. They were developed to guide the decision making process of remediation but with no intent to identify specific remediation levels or technology or to contradict existing laws or regulations.

EUWG developed a number of community guidelines for contaminated land and water for DOE to use in making future use decisions. Fourteen guidelines for contaminated land and five for contaminated water were written. The land guidelines were ranked in order of importance, while the water guidelines were of equal importance.

The primary guidelines for contaminated land included:

- Property owners/operators must comply with all laws and regulations to ensure safe working conditions and to protect nearby residents and the environment
- Contamination left on site must be controlled to prevent spreading
- Trust funds should be established for long-term care (stewardship) of contaminated land
- Impacts to the environment should be minimized during remediation and the environment should be restored when remediation is complete
- Buffer zones should be put in place to protect nearby and future populations from areas with residual contamination
- End use of contaminated land should allow for future development

Guidelines for water include:

- Groundwater leaving the reservation should meet criteria for unrestricted use

- Contaminated groundwater must be controlled so that it doesn't impact uncontaminated groundwater
- Contaminated groundwater remaining after remediation must be controlled to prevent spreading
- Contaminated groundwater underneath uncontaminated land should be restored to health-based standards if possible
- Surface water on the ORR must eventually meet safe water quality standards

**Recommendations from the End Use Working Group**

In addition to the guidelines for DOE to follow in making end use decisions, the EUWG wrote several specific recommendations to DOE, which are summarized here.

*Recommendation for Bethel Valley of ORNL*

The central campus of ORNL had, and still has, a number of contaminated areas that threaten the health and safety of employees and the associated working environment.

The EUWG recommended that remediation decisions should achieve, at a minimum, a controlled industrial end use for the entire Bethel Valley area, which would allow for surface use of contaminated land.

*Recommendation to Site a Waste Disposal Facility*

The EUWG recognized that large volumes of waste would be generated during cleanup activities. It also recognized that it would be impractical to try to ship all waste off-site.

The EUWG recommended that a waste disposal facility be built to accept contaminated materials meeting specified waste acceptance criteria. Material not meeting the criteria would be shipped off-site.

The recommendation was to site the facility in East Bear Creek Valley, which had been used for earlier waste disposition. The Environmental Management Waste Management Facility was later built at that location.

*Recommendation for the End Use of Disposal Areas in Melton Valley*

Melton Valley, in the southwest portion of the ORR, had been used for many years as a disposal area of burial grounds, seepage pits, and hydrofracture sites. It was also the solid waste storage area for about 50 off-site facilities.

Because the area contains highly radioactive waste, excavation and removal was considered too risky and cost prohibitive.

The EUWG recommended that the area have restricted use, but that worker safety should be ensured and migration of contaminants controlled to prevent release of contaminants in White Oak Lake and subsequently the Clinch River. The group also recommended that DOE continue to monitor major sources of radiological risk.

Remediation of Melton Valley was completed in 2006.

*Recommendation for the End Use of the Upper East Fork Poplar Creek Watershed*

The Upper East Fork Poplar Creek Watershed (UEFPC) lies between Pine Ridge and Chestnut Ridge, which is also the location of the Y-12 National Security Complex. Y-12 was built in the 1940s to produce enriched uranium by means of an electromagnetic process.

Y-12's primary mission today and well into the future is dismantling of nuclear arms and storage of highly enriched uranium.

But during World War II and the ensuing Cold War years operations at Y-12 resulted in significant contamination of soil, surface water, and groundwater.

For the purpose of its recommendations, the EUWG divided Y-12 into eastern and western portions – the west end being more heavily contaminated than the east.

The EUWG recommendations for the UEFPC Watershed and Y-12 are as follows:

- The western end of Y-12 is expected to remain controlled industrial property
- The eastern end should be made suitable for uncontrolled industrial use
- Lake Reality and New Hope Pond, in the eastern portion, will require continued federal government control and use of the area should be consistent with end use of the eastern end
- Chestnut Ridge should be used for regulated waste disposal for the ORR
- UEFPC must eventually meet State water quality standards. In the interim, water quality must not pose an unacceptable risk to Y-12 workers or residents or businesses near the creek or its tributaries
- Contaminated groundwater from Y-12 must not be allowed to contaminate uncontaminated groundwater

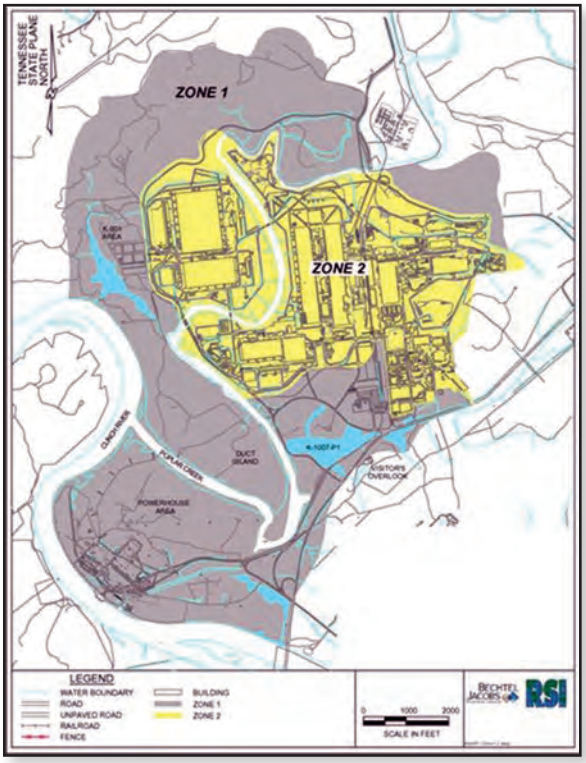
*Recommendation for the End Use of the Former K-25 Site at East Tennessee Technology Park (ETTP)*

The K-25 Site was one of the three major plants built on the ORR during World War II. It is the reservation's western most facility on the Clinch River.

From 1945 to 1964 the site produced weapons-grade uranium. From 1965 to 1985 the site produced commercial-grade uranium. Of the 4,600 acres that lie in the administrative watershed of ETTP, about 1,000 acres have been impacted by operations at the site.

In addition to five large uranium processing buildings, the site also contained many support buildings, labs, maintenance shops, and so on.

Most of the demolition work of old facilities on the ORR has and is taking place at ETTP. Almost all of the original buildings will be torn down eventually. The site also has a number of contaminated areas.




*Map of ETTP showing Zones 1 and 2.*

For administrative purposes ETTP was divided into three zones. Zone 2 is the central industrial and administrative area. Zone 1 borders Zone 2 from the south to the northwest and borders the Clinch River. It is not as developed as Zone 2. Zone 3 is a former support area on the northeast quadrant of the site.

The EUWG made the following recommendations regarding the end use of ETTP:

- Zone 1 should be remediated to allow for uncontrolled industrial end use, with a focus on natural resource conservation
- Zone 2 should be remediated to provide for uncontrolled industrial end use
- Zone 3 should be remediated to provide for controlled industrial end use. If the existing K-1070-B and K-1070 C/D waste disposal areas in Zone 3 cannot be fully remediated to controlled industrial use, then

these areas should be maintained as restricted access waste disposal properties and should be managed to ensure the safety of surrounding populations and the environment.
- The continued storage of $UF_6$ (uranium hexafluoride) is not compatible with these recommended end uses. The incompatibility should be resolved on a schedule that coincides with the planned remediation of the site ($UF_6$ cylinders have been removed from the site).

## Stewardship

The EUWG recognized that if DOE implemented its recommendations some radioactive and chemical contaminants would have to be managed in place or moved to a different disposal facility. Transportation off the reservation to another facility was deemed too expensive, potentially risky, and politically difficult because few places want to receive waste. Because most contamination would remain on the reservation the EUWG could not endorse any remediation program without assurance of long-term care.

As a result the EUWG formed a Stewardship Committee to develop detailed stewardship recommendations, which produced two reports on stewardship.

Summaries of those reports follow.

**Stakeholder Reports on Stewardship Summarized**
In July 1998, the Stewardship Committee, recommended by the End Use Working Group, produced the first of two reports on stewardship – Stakeholder Report on Stewardship. The report describes the need for a stewardship program and the basic elements it should have.

*What is Stewardship?*
The committee defined stewardship as "Acceptance of the responsibility and the implementation of activities necessary to maintain long-term protection of human health and the environment from hazards posed by residual radioactive and chemically hazardous materials."

The report outlined a number of attributes for attaining a successful stewardship program.

*Attributes of Successful Stewardship*
- Stewardship planning must be done concurrently with remediation.
- Stewardship of contaminated sites requires that society accept responsibility for providing a healthy and safe environment for current and future generations. The federal government must provide funding for long-term stewardship. All stakeholders must work together to develop and implement a stewardship program.
- Stewardship programs must be designed to protect human health and the environment for the life of the contaminants.
- Stewardship programs must be adaptable to changing physical and technological conditions and political demands to provide ongoing protection.

*Elements of stewardship*
- Authority and funding
- Stewards
- Operations
- Physical controls
- Institutional controls
- Information systems
- Research

*Authority and funding*
Long-term stewardship is impossible without concurrent financial support. At federal facilities authority begins with Congress and is delegated to an appropriate federal entity.

*Stewards*
Groups or individuals responsible for stewardship activities.

- Principal steward has legal responsibility for contaminated land and facilities including financial obligation and to take corrective action if the stewardship program becomes ineffective. In Oak Ridge the principal stewardship is the Department of Energy.

- Implementation steward is responsible for monitoring, maintenance, and record keeping. In Oak Ridge implementation stewards are DOE and contractors.

- Oversight stewards ensure that goals and requirements of a stewardship program are met. In Oak Ridge the oversight stewards are the Tennessee Department of Environment and Conservation, the Environmental Protection Agency, and interested stakeholders (the public).

*Operations*
The success of stewardship is dependent upon the numerous activities that must be conducted to ensure remediation remains effective and systems are working as expected.

- Monitoring – regular sampling to make sure controls are working and to provide continuous information about the nature and extent of contamination.
- Maintenance – regular upkeep of remediation systems.
- Surveillance – regular oversight of remediation and institutional systems to ensure that all necessary activities occur.
- Enforcement – legal restraints to maintain human health and the environment.
- Inspection and reevaluation – periodic review of existing systems and activities to ensure continued need and effectiveness.
- Public participation – continuous involvement of the public to ensure concerns are addressed and relevant public information is provided.

*Physical Controls*
Physical controls are barriers to limit public access to contaminated areas or areas where contamination has been remediated in place. These could include natural barriers such as trees or surface water or engineered barriers like fences and warning signs.

*Institutional Controls*
Institutional controls are legally binding provisions to control future uses of land or resources by limiting development or restricting public access with residual contamination. They can be divided into governmental controls and proprietary controls.

- Government controls use the power of national, state, or local governments to impose restrictions.
- Proprietary controls allow property owners to control the use of or limit access to their properties.

*Stewardship Information*
Stewardship information provides present and future stakeholders with records of locations, amounts, and characteristics of contaminants. Information must be kept current. Data from surveillance and monitoring activities must be readily available.

*Research*
When remediation activities are completed significant data gaps and uncertainties will remain about hazards. Over time new data may provide better assessments of contamination, risks, appropriate remedial technologies, management of wastes, and so on.

**Stewardship and CERCLA**
The principal federal law governing hazardous waste cleanup is the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA, also known as Superfund). The Environmental Protection Agency evaluates federal facilities for inclusion on the National Priorities List for cleanup.

Under CERCLA a record of decision (ROD) documents a cleanup method for any given area. A number of pre-ROD documents are prepared leading to a cleanup decision including a remedial investigation/feasibility study and a proposed plan. The ROD decision is taken from the proposed plan. The public can provide input on the proposed plan.

The Stakeholder's Report on Stewardship said that stewardship planning must be part of the CERCLA process whenever a remedy for cleanup calls for leaving radioactive or chemically hazardous materials on the ORR. The report states that 'long-term stewardship issues and requirements should be addressed at each phase of the process to ensure effective integration of stewardship into decision making.' Specifically the report said stewardship requirements should be included in the feasibility study, the proposed plan, and the ROD, and also included in post-ROD documents - the remedial design work plan, the remedial action work plan, and the remedial action report that documents exactly what actions were taken when the project is finished.

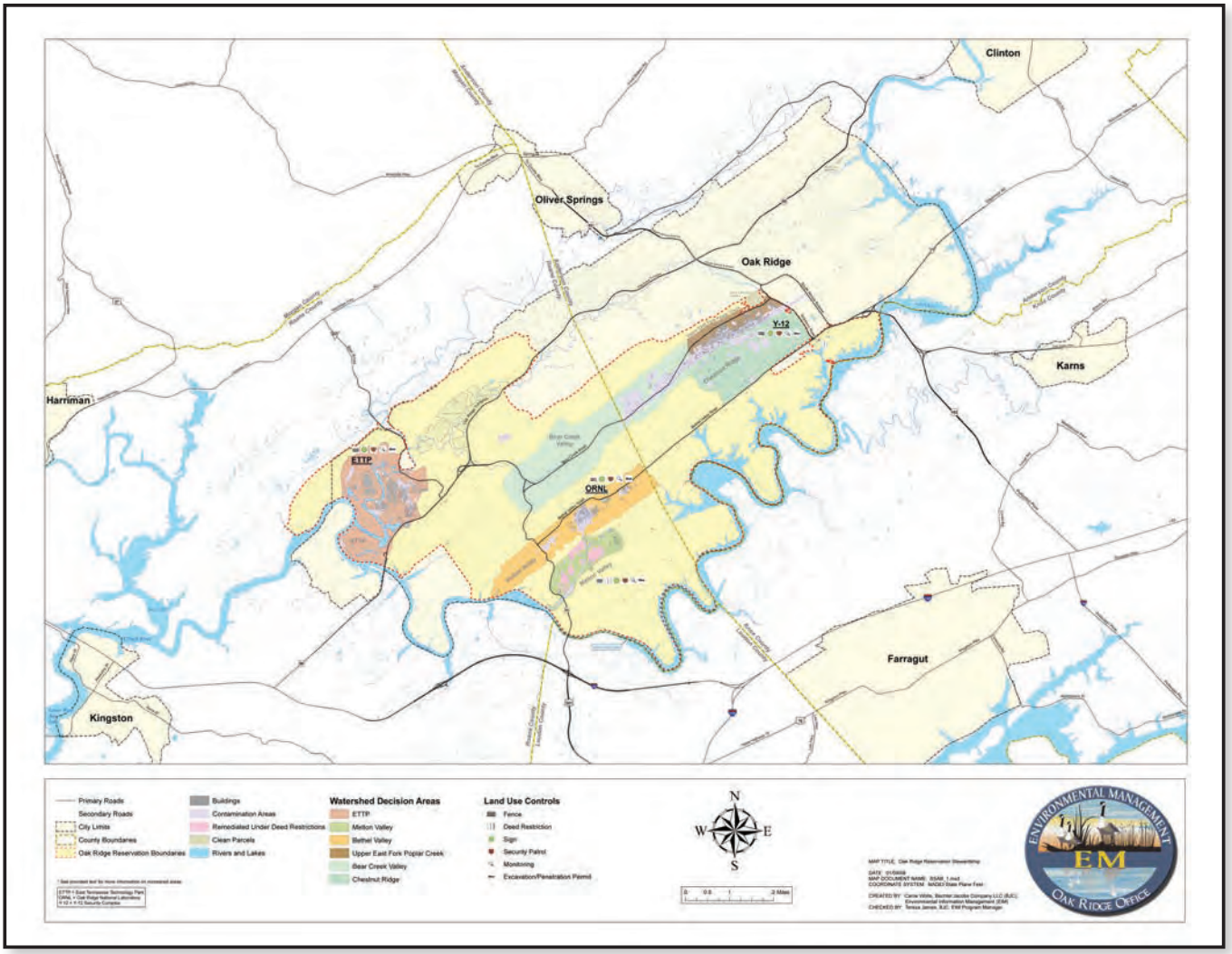
**The Problem on the Oak Ridge Reservation**
While the ORR is about 35,000 acres only 10 percent contains old waste disposal sites. Contaminants of concern in these areas include uranium- 235 and 238, strontium-90, cesium-137, technetium-99, mercury, tricholorethene, trichloroethane, volatile organic compounds, polychlorinated biphenyls, and others. Half-lives of radioactive elements range from 12 years to basically forever.

Abundant rainfall in the area and high water tables contribute to leaching of contaminants from waste areas into surrounding soil, surface water, and groundwater. Migration of contaminants in groundwater is especially difficult to track.

The reservation has been divided into large tracts of land that are equivalent to the major watersheds in the area. One or several RODs for each watershed will be produced instead of developing many documents for individual cleanup sites.

The major watershed decision areas are:
- East Tennessee Technology Park
- Melton Valley
- Bethel Valley
- Upper East Fork Poplar Creek
- Bear Creek Valley
- Chestnut Ridge

Within each of these watersheds are remediated areas that have stewardship requirements in place or that will be remediated eventually and will require long-term stewardship. See the Stewardship Map for a depiction of the various watersheds and related physical and institutional controls that are currently in place.




*Stewardship map*

**Stakeholder Report on Stewardship, Volume 2**

In 1999 the Stewardship Working Group, which was the result of a recommendation made in the first Stakeholder Report, published a second volume on Stewardship.

The work of the Stewardship Working Group in the second Stakeholder's report was based on the earlier work, but the basic elements and unresolved issues in the first report were more fully developed in the second report. Unresolved issues included more explicit treatment of stewardship in CERCLA documents and five year reviews and the role of the community with regard to oversight of stewardship.

Basically the second report went into more detail in the execution of stewardship activities and the roles of the stewards and the public.

# OAK RIDGE OFFICE OF ENVIRONMENTAL MANAGEMENT (OREM)

11/18/2020

John A. Mullis II, Manager Date

**JOHN A. "JAY" MULLIS II, MANAGER**
LAURA WILKERSON, DEPUTY MANAGER
MIKE KOENTOP, EXECUTIVE OFFICER
RODRIGO RIMANDO, HQ SITE LIAISON

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Katherine Hernandez
Carol Jennings
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Jessica Speed
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Technical Support Contractors: 2

**Portfolio Federal Project Directors**
Jim Daffron, ETTP
Nathan Felosi, ORNL
Brian Henry, Y-12

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Alan Stokes, Director

**EM-921**
**Project Management**
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**EM-922**
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Technical Support Contractors: 7

**EM-93**
**Operations Management Division**
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**EM-932**
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Kara Bush
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Kevin Levy
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Vanna Gaffney
Ryan Hilmes
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Technical Support Contractors: 6

**EM-94**
**Quality and Mission Support Division**
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**EM-941**
**Quality Assurance**
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**EM-942**
**Program Support**
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Alicia Harris
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Elizabeth Phillips
Ellen Reed
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Somer Stephens
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Technical Support Contractors: 8

+Special Assignment/Detail

Administrative Support Contractors: 11

# U.S. Department of Energy Environmental Management Site-Specific Advisory Board

# Policies and Procedures Desk Reference

**Prepared by**

**The Office of Intergovernmental and Community Activities**

**June 2013**

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# ENVIRONMENTAL MANAGEMENT SITE-SPECIFIC ADVISORY BOARD

## Policies and Procedures Desk Reference

The Office of Intergovernmental and Community Activities

The purpose of this document is to provide guidance regarding the operation of the Environmental Management Site-Specific Advisory Board (EM SSAB or Board). This updated guidance supersedes the guidance document dated September 2011. This document is intended to summarize pertinent sections of the requirements of the Federal Advisory Committee Act (**FACA**) of 1972, **5 United States Code (U.S.C.) Appendix 2**; the General Services Administration (GSA) implementing regulations, **41 Code of Federal Regulations (41 CFR) Subpart 102-3**; and the Department of Energy (DOE or Department) Manual entitled *Advisory Committee Management Program*, **DOE M 515.1-1**. It is not intended to replace these documents. In addition, it provides EM SSAB specific direction for the Board.

# I. Background and Introduction

The EM SSAB, established in May 1994, involves stakeholders directly in DOE EM cleanup decisions. While only one FACA-chartered EM SSAB exists, eight local boards under its umbrella charter have been organized at the following sites: Hanford in Washington State, Idaho, Northern New Mexico, Nevada, Oak Ridge in Tennessee, Paducah in Kentucky, Portsmouth in Ohio, and Savannah River in South Carolina. The EM SSAB charter has been renewed every two years since 1996.

In accordance with its charter, the EM SSAB exists to provide the Assistant Secretary for Environmental Management, the appropriate Department of Energy (DOE) Field Managers or Assistant Managers for EM activities, and any other DOE officials the Office of the Assistant Secretary shall designate, with information, advice, and recommendations concerning issues affecting the EM Program at various sites. Specifically, at the request of the Assistant Secretary or the site managers, the Board may provide advice and recommendations concerning the following EM site-specific issues: clean-up standards and environmental restoration; waste management and disposition; stabilization and disposition of non-stockpile nuclear materials; excess facilities; future land-use and long-term stewardship; risk assessment and management; and clean-up science and technology activities. The Board may also be asked to provide advice and recommendations on other EM projects or issues.

The local boards organized under the EM SSAB Charter draw upon diverse community viewpoints to provide advice and recommendations to DOE. Some local boards are associated with DOE field offices for which EM is the landlord program, while other local boards are supported by field offices that are managed either by the Office of Science (SC), the National Nuclear Security Administration (NNSA), or the Office of Nuclear Energy (NE). However, in accordance with the EM SSAB Charter, the mission and operation of any given local board is unaltered whether the landlord is EM, SC, NNSA, or NE.

The goal of the EM SSAB is to more directly involve a diverse group of stakeholders in EM planning and decision-making processes for the nuclear weapons complex cleanup. The EM SSAB is only one component of EM's public participation program and is not intended to be an exclusive means of public participation. It is the policy of DOE and EM to conduct its programs in an open and responsive manner, thereby, encouraging and providing the opportunity for public participation in its planning and decision-making processes.

## II. Roles and Responsibilities

### A. DOE Headquarters

Office of the Secretary of Energy

The Secretary of Energy, per the requirements of FACA and the CFR, will

- Comply with FACA and the CFR. **FACA § 8; 41 CFR § 102-3.105(a)**
- Issue administrative guidelines and management controls. **FACA § 8(a); 41 CFR § 102-3.105(b)**
- Designate a Committee Management Officer (CMO). **FACA § 8(b); 41 CFR § 102-3.105(c)**
- Ensure that meetings of the full advisory board are open to the public unless a written determination for closing any meeting is provided. **41 CFR § 102-3.105(d)**
- Review, at least annually, the need to continue the advisory committee. **41 CFR § 102-3.105(e)**
- Develop procedures to assure that advice and recommendations of the advisory committee is the result of independent judgment. **41 CFR § 102-3.105(g)**
- Assure that the interests and affiliations of advisory board members conform to applicable conflict of interest statutes and regulations. **41 CFR § 102-3.105(h)**
- Designate a Designated Federal Officer (DFO) for the advisory committee. **41 CFR § 102-3.105(i)**
- Provide opportunity for reasonable public participation in advisory committee activities. **41 CFR § 102-3.105(j)**

Office of the Executive Secretariat (MA-70)

The Executive Secretariat, per the requirements of FACA and the CFR, will

- Ensure compliance with FACA. **FACA § 8(b)(1); 41 CFR § 102-3.115**
- Ensure that the interests and affiliations of advisory committee members are reviewed for conformance with applicable conflict of interest statues.
- Renew or terminate the EM SSAB Charter as appropriate. Annually, review the need to continue the EM SSAB. **41 CFR § 102-3.115**
- Process *Federal Register* notices for EM SSAB meetings. **FACA § 8(b)(1), 10(a)(2); 41 CFR § 102-3.115, 102-3.150(a)**. (See section II of this guidance for further parameters.)

DOE Manual 515.1-1 requires that the Executive Secretariat

- Act as the Department's CMO. **Manual § I.6.c**
- Review and concur on all advisory committee packages and appraise the need for or the continuation of advisory committees. **Manual § I.6.c**
- In coordination with heads of departmental elements and the Office of General Counsel, ensure that advisory committees are fairly balanced in membership in terms of points of view represented and functions to be performed. **Manual § I.6.c**
- Review and concur on all requests for closing part or all of an advisory committee meeting. **Manual § I.6.c**
- Maintain hard copies of the following advisory committee records. **Manual § VII.2.a:**
    - Committee establishment and renewal proposals
    - *Federal Register* notices
    - Detailed minutes and transcripts (if available) of all meetings
    - Committee reports.

<u>Office of the Assistant General Counsel for General Law</u>

The Manual requires that the Office of the Assistant General Counsel for General Law:

- Provide legal support for EM SSAB Charter renewal, charter termination, official appointments of Board members, and policy issues. **Manual § I.6.g**

To enhance compliance with FACA, the CFR, and DOE policy, the Office of the Assistant General Counsel for General Law will

- Review operating procedures/bylaws submitted by the local boards to be approved by the DFO.

<u>Office of the Assistant Secretary for Environmental Management (EM-1)</u>

EM-1, per the requirements of FACA and the CFR, will

- Ensure compliance with FACA and the CFR
- Issue administrative guidelines and management controls
- Appoint and remove Board members (in limited cases, this authority has been delegated to the field under section III.C.3 of this guidance).

<u>Office of Intergovernmental and Community Activities</u>

The Office of Intergovernmental and Community Activities, per the requirements of FACA and the CFR, will

- Manage and maintain a library of EM SSAB documentation, including annual reports, work plans, recommendations and responses, meeting minutes, and membership information. **FACA § 10(b), 12(a)**
- Provide the organizational location for the EM SSAB Designated Federal Officer (DFO), a position that is required for management of each Federal advisory board. (See responsibilities in Section C below.) **FACA § 10 (e); 41 CFR § 102-3.120**

DOE Manual 515.1-1 requires that the agency perform certain functions in administering its chartered advisory boards. The following functions are assigned to the Designated Federal Officer and the office in which she/he is located:

- Prepare *Federal Register* notices for local EM SSAB public meetings. **Manual § I.6.i**
- Ensure that conflict of interest regulations are followed. **Manual § I.6.i**
- Prepare, process, and obtain approval of EM SSAB appointment/reappointment membership packages. **Manual § I.6.i**
- Prepare, process, and obtain approval of EM SSAB Charter renewal. **Manual § I.6.i**
- Maintain EM SSAB records and documentation. **Manual § I.6.i**

To enhance compliance with FACA, the CFR, and DOE policy, the Designated Federal Officer and Office of Intergovernmental and Community Activities will

- Delegate to local DOE employees the responsibility to serve as Deputy Designated Federal Officers (DDFOs) for local boards of the EM SSAB. (A site may have two Co-DDFOs appointed at one time).
- Inform the EM SSAB members of Departmental processes, programs, projects, and activities directly affecting the Board's mission and purpose.
- Coordinate the review and approval of local board operating procedures/bylaws with the Office of General Counsel to ensure that they are in compliance with FACA and other regulations and requirements.
- Coordinate the review and approval of the EM SSAB Annual Comprehensive Report to Congress.
- As required, coordinate HQ review of presentations to be given to the local boards by DOE employees, its contractors or other representatives.

<u>EM Program Offices (as appropriate)</u>

To enhance compliance with FACA, the CFR and DOE policy, EM program offices will

- Respond in a timely fashion to EM SSAB recommendations, as appropriate.

B. DOE Field Offices

Although DOE headquarters (HQ), through the Assistant Secretary for EM, the CMO and the EM SSAB DFO, is responsible for the EM SSAB, DOE field offices are accountable to DOE-HQ for local board activities and act for EM at the local level for the Deputy Designated Federal Officers, issued by the EM Designated Federal Officer.

The DOE field offices, per the requirements of FACA and the CFR, will:

- Ensure required records on local board costs and membership are maintained, as each agency needs to keep records that will fully disclose the disposition of any funds at the disposal of the local board. **FACA § 12(a); 41 CFR § 102-3.175(b); Manual § VII**
- Make records available to interested members of the public. **41 CFR § 102-3.170; Manual § VII.4**
- Recommend to the DFO, a senior DOE official (or officials) to serve as the DDFO for the local board. **FACA § 10(e); 41 CFR § 102-3.120**
- Ensure that DOE diversity goals are met through adequate outreach and recruitment efforts for membership. Board membership should reflect a diverse cross-section of those directly affected by and interested in the community from which the local board draws its members. **41 CFR 102-3.60 (b)(3)**
- Provide adequate resources to enable the local board to carry out its functions as described in **FACA § 12 (b); 41 CFR § 102-3.95(a); Charter § 7; Manual § I.6.h**

To enhance compliance with FACA, the CFR, and DOE policy, the DOE field offices will

- Ensure that member appointment packages are submitted to EM Headquarters with nominations for the Assistant Secretary's appointment. Assistant Secretarial approval of new and reappointed members is required, with the exception of member appointments to fill an unexpired term. (See section III.C.3.)
- Provide timely response to local board recommendations.
- Review and, if satisfactory, submit local board operating procedures/bylaws to the DFO for review and coordination with the Office of the Assistant General Counsel for General Law to ensure that they are in compliance with FACA and other regulations and requirements.
- Review and approve local annual work plans.
- Review and approve EM SSAB budget requests and incorporate, as appropriate, into the EM budget development process.
- Coordinate with DOE-HQ on EM SSAB issues and processes.

C. Designated Federal Officer (DFO)/Deputy Designated Federal Officer (DDFO)/Federal Coordinator

Under **FACA § 10(e) and 41 CFR § 102-3.120**, each federal advisory committee is required to have a DFO, in this case a DOE employee who works closely with the Board. The DFO for the EM SSAB is located in the Office of Intergovernmental and Community Activities. The DFO delegates to local DOE field site employees the responsibility to provide day-to-day management of the boards. These employees are known as DDFOs. A Federal Coordinator may be appointed by the appropriate site official to assist the DDFO in board activities.

The DFO/DDFO, per the requirements of FACA and the CFR, willL

- Call for and attend board meetings. **FACA § 10(e)&(f), 41 CFR § 102-3.120(a),(c)&(e)**
- Adjourn board meetings if it is in the public interest. **FACA § 10(e), 41 CFR § 102-3.120(d)**
- Approve meeting agendas. **FACA § 10(f), 41 CFR § 102-3.120(b)**
- Ensure required records on board costs and membership are maintained, as each agency needs to keep records that will fully disclose the disposition of any funds at the disposal of the board. **FACA § 12(a); 41 CFR § 102-3.175(b)**
- Ensure that detailed minutes of meetings, containing items specified in **41 CFR § 102-3.165**, are prepared and duly certified. **FACA § 10(c), 41 CFR § 102-3.165**

DOE Manual 515.1-1 requires that the DFO/DDFO, with Federal Coordinator assistance, as appropriate,

- Ensure that conflict of interest regulations are followed. **DOE Manual § IV.6**
- Arrange for reimbursement of travel expenses as necessary. **DOE Manual § V.6.a.(2).(f)**
- Ensure that each board meeting is held at a reasonable time and in a manner or place reasonably accessible to the public. **DOE Manual § V.3**

To enhance compliance with FACA, the CFR, and DOE policy, the DFO/DDFO/Federal Coordinator will

- Encourage the board to listen carefully to all points of view and to work toward developing group advice.
- Provide timely information for *Federal Register* notices to the Office of Intergovernmental and Community Activities and work closely with field site Public Affairs to issue broad local notification about EM SSAB meetings and activities to, e.g., the local media, public reading rooms, and public libraries.
- Ensure that the board has the opportunity to offer advice and recommendations on the charges issued by EM. To support this, the DFO/DDFO/Federal Coordinator will

- Ensure that EM's decision-making process is clearly communicated.
- Inform the board members of EM programs, projects, and activities directly affecting the EM SSAB mission and purpose.
- Work closely and cooperatively with the board to prioritize issues.
- Work with site management and the local board to develop annual work plans with goals and priorities and to approve those work plans on the agency's behalf.

D. EM SSAB Members

The success and effectiveness of the EM SSAB depends largely upon the interest, commitment, input and integrity of its members. EM SSAB members are expected to

- Attend meetings and participate in an open, constructive, and respectful manner.
- Provide advice and recommendations to DOE decision-makers at the field and DOE-HQ levels on relevant EM issues.
- Review, evaluate, and comment on EM documents and other materials.
- Members who are appointed to represent specific groups are expected to report to those groups on board activities and issues.
- If asked to share with community groups descriptions of board activities and their experiences as a board member, invite public participation and to promote interest for potential new members. These kinds of activities, however, are voluntary and are not a requirement for membership.
- When sharing their experiences with other community groups about their position on a local board, speak and/or participate in their personal capacities, not representing the local board. Members asked to participate in community events in their official capacity as a board member must consult with the local board DDFO.

## III. Operating a Local Site-Specific Advisory Board

A. Public Participation and Record-Keeping

Public Participation

In accordance with FACA and the CFR

- Each advisory committee meeting shall be open to the public. **FACA § 10(a)(1)**
    - Although subject matter may indicate the need to close a meeting (e.g., for security considerations), **FACA § 10(d)** requires the head of the agency to which the committee reports to approve, in writing, closed sessions of full committees. **41 CFR § 102-3.155**

- Each meeting shall be held at a reasonable time and in a manner or place reasonably accessible to the public at facilities that are readily accessible to and usable by persons with disabilities. **41 CFR § 102-3.140(a**)
- Any member of the public shall be permitted to file a written statement with the committee. **41 CFR § 102-3.140(c)**
- Any member of the public shall be permitted to speak at designated times. **FACA § 10(a)(3); 41 CFR § 102-3.140(d); DOE Manual § V.3.a.(2).(b)**
- Any meeting conducted in whole or part by teleconference, videoconference, the Internet or other electronic medium must meet the requirements of **41 CFR** Subpart D; **41 CFR § 102-3.140(e)**
- Subcommittees (also referred to locally as "committees") of the local boards are not required to comply with the provisions of FACA so long as the full local board deliberates on any recommendations before they are approved. **41 CFR § 102-3.35 and 102-3.145** However, if subcommittee meetings are open to the public, they should be noted as such on the field office's website, the local board website, and any public board calendars. In addition, at least one public comment period should be set aside during the meeting. At the discretion of the local site management, members of the public may participate in subcommittee meetings in accordance with the local board's bylaws.

In accordance with the DOE Manual,

- Media representatives attending and reporting on open committee meetings are at liberty to use tape recorders, cameras, and electronic equipment for broadcast purposes. The use of such equipment must not interfere with the orderly conduct of the meeting. To preclude any disruption, news media personnel should be encouraged to position all equipment before the meeting and to defer removal until an ample intermission period or meeting adjournment. **DOE Manual § V.3.b.**

<u>Public Notification</u>

In accordance with FACA and the CFR,

- Notice must appear in the *Federal Register* at least 15 calendar days prior to EM SSAB public meetings. **FACA § 10(a)(2) and 41 CFR § 102-3.150(a).**
  - Notices must include
    - The name of the advisory board, date, time, and place of the meeting
    - The purpose of the meeting and a summary of the meeting agenda
    - A statement as to whether all or part of the meeting will be closed
    - The name, address, and phone numbers of the DFO/DDFO or another contact for a citizen who may wish to make a statement to the board
    - A contact for accommodations to persons with disabilities under the Americans with Disabilities Act.

- All meetings shall have the advance approval and be attended by the DFO and/or DDFO. **FACA § 10(e)&(f); 41 CFR § 102-3.120(a)&(c)**

In accordance with the DOE Manual,

- Local DOE operations, field, or area offices must ensure that *Federal Register* notices are sent to the Office of Intergovernmental and Community Activities in timely manner. Whenever possible, 30 days notice will be given. **DOE Manual § V.3.c**

To enhance compliance with FACA, the CFR and DOE policy, EM requires that

- *Federal Register* notices also include the locations where meeting minutes will be made available to the public, an individual to contact to acquire copies of the minutes, and information on the public comment period.
- Meetings are publicized on the board website and in other places that are likely to attract public participation.
- Local DOE operations, field, or area offices ensure that timely notification is provided to the Office of Intergovernmental and Community Activities in the event a public meeting has been cancelled following the original submission of the *Federal Register* notice.

<u>Minutes and Records</u>

In accordance with FACA and the CFR,

- Detailed minutes of each advisory committee meeting shall be kept on file**. FACA §10(c), 41 CFR § 102-3.165**
  - Minutes must include
    - The name of the board
    - The meeting time, date, and place
    - A list of meeting attendees including members of the public presenting oral and/or written statements, and an estimated number of other public present
    - An accurate description of each matter discussed and the resolution, if any, made by the board
    - Copies of all reports received, issued, and approved by the board
    - Copies of each recommendation drafted or approved by the board.
- The DDFO must ensure that the meeting minutes are certified by the Chair. **41 CFR § 102-3.165**
- The local boards and the field offices must maintain in a single location for public inspection and copying copies of records, reports, minutes, transcripts, drafts, working papers, appendixes, studies, agenda, or other documents which were made available to or prepared for or by each local board. **FACA § 10(b); 41 CFR § 102-3.170**
- The field offices and the DDFOs must keep records to fully disclose the disposition of any funds which may be at the disposal of its advisory committees and the nature and extent of their activities. **FACA § 12(a); 41 CFR § 102-3.175(b)**

- The multi-site structure of the EM SSAB necessitates that fiscal records be developed and maintained at local sites.

In accordance with DOE Manual 515.1-1,

- The minutes must include names of any member who may have recused themselves from a meeting or a portion of it and their reason(s) for doing so. **DOE Manual § V.5.a.(2)**
- Board minutes must be posted on the board webpage within 45 days after the meeting, and the EM SSAB DFO and the Deputy Committee Management Officer at U.S. DOE must be advised as to the posting and its URL.

To enhance compliance with FACA, the CFR and DOE policy, EM requires that the following electronic submissions be made:

- One copy of all local board reports, minutes, transcripts (where applicable), recommendations and responses, self-evaluations, and EM SSAB work plans to the local reading room and/or other appropriate information resource center(s).
- One copy of each EM SSAB recommendation and the EM response to the DFO at DOE-HQ for files.
- One copy of minutes, annual reports, self-evaluations, and work plans to the DFO at DOE-HQ for files.

<u>Annual Comprehensive Review to Headquarters</u>

The DFO is required each year to provide to the GSA Committee Management Secretariat (through the DOE Committee Management Office) an Annual Comprehensive Review (formerly Annual Report) on the activities of the EM SSAB during the preceding fiscal year. **DOE Manual VII. 3(b)**. Accordingly, local EM SSAB DDFOs and Federal Coordinators must submit each local board's data to the DFO within one month of the close of each fiscal year.

In accordance with FACA and the CFR,

- An informational report from DOE is provided to the GSA at the close of each fiscal year. **41 CFR § 102.105(e) and 102-3.175(b)**.
  - The report includes
    - The activities, status, and changes in EM SSAB composition during the fiscal year
    - The dates of EM SSAB meetings and names and occupations of its members
    - The estimated annual cost to DOE to fund, service, and supply the EM SSAB
    - Any reports and recommendations submitted by the EM SSAB.

In accordance with the DOE Manual 515.1-1,

- The CMO will issue instructions to the DFO regarding reporting requirements, procedures, and submission dates. The CMO will then be responsible for coordinating the Annual Comprehensive Review. **DOE Manual § VII.3.b.2**
- The DFO, and subsequently the DDFO, is responsible for accurately and completely filling out individual committee reports by the due date assigned by the CMO. **DOE Manual § VII.3.b.2**

To enhance compliance with FACA, the CFR and DOE policy, EM requires that

- The Annual Comprehensive Review include the following data:
  - Data from the previous fiscal year, to include
    - The total number of reports (including annual reports, recommendation reports, letter reports, etc), the titles of each report or recommendation, and month/day/year they were generated
    - The total number and dates and locations of meetings held, and whether they were virtual (conference calls, video teleconference, webinars, etc.), or in-person. The names of board members and the community or entity they represent (including current members and those who served on the board at any time during the year, but are no longer there)
    - The total federal support years (number of full-time employees that work on EM SSAB issues throughout the fiscal year – i.e., if persons spent half of their working time on EM SSAB issues, they would count as 0.5 full-time employees, whereas if persons spent all their time on EM SSAB issues they would count as 1.0 full-time employees).
  - Data required from both the previous fiscal year and the next year's projections, to include
    - Personnel payments to non-federal members (total dollar amount)
    - Personnel payments to federal members
    - Personnel payments to federal staff
    - Personnel payments to non-member consultants
    - Travel and per diem to non-federal members
    - Travel and per diem to federal members
    - Travel and per diem to federal staff
    - Travel and per diem to non-member consultants
    - Other (rent, contractor support services, user charges, graphics printing, mail, etc)
    - The total dollar amount of all costs.
  - Information on the impact the board has had on DOE activities during the past fiscal year is required (e.g., the Hanford Advisory Board recommended that the Department reduce indirect costs, saving more than $200 million; the Nevada Site-Specific Advisory Board supported the decision to apply for a RCRA Part B permit that will enable the site to accept mixed low-level waste from throughout the DOE complex, etc.).

B. Board Recommendations and DOE Responses

FACA, the CFR, and the DOE Manual do not provide specific parameters for Board recommendations or DOE responses. The CFR does suggest that EM continually seek feedback from the Board members and the public regarding the effectiveness of the Board's activities. At regular intervals, EM should communicate to the Board members how their advice has affected DOE programs and decision-making. **41 CFR § 102-3.95(e)**

To enhance compliance with FACA, the CFR, and DOE policy, EM requires that

- In general, and in a timely fashion, DOE field offices should reply to site-specific recommendations. The Assistant Secretary for EM is responsible for replying to recommendations regarding cross-site or national issues. Responses should be in writing. A copy of any recommendation and response should be sent to the Office of Intergovernmental and Community Activities.

DOE written responses should include the following:

- A clear statement of acceptance or rejection of the recommendation, in whole or in part;
- If the recommendation is accepted in whole or in part, a statement about how the changes will be implemented and in what time frame;
- If the recommendation is rejected in whole or in part, a substantive reason for the decision, as well as possible alternatives for addressing the concerns or issues raised in the recommendation; and
- If unresolved issues still remain, DOE may indicate this in written correspondence to the local EM SSAB with the goal of establishing (or continuing) a near-term dialogue.

C. Membership

Membership Composition

FACA and DOE require that the Board membership provides for broad diversity, reflecting the affected community and region. In this regard, local boards must make vigorous outreach efforts and be able to demonstrate that they have attempted to recruit members from all segments of their communities. In order to comply with both FACA and departmental policies regarding balance and diversity requirements of advisory committees, the DOE Offices of EM, Management (MA), and GC closely scrutinize Board membership.

In accordance with FACA and the CFR,

- The Board must be "fairly balanced in terms of the points of view represented and functions to be performed." **41 CFR § 102-3.60(b)(3), Appendix A to Subpart B**

In accordance with the DOE Manual 515.1-1,

- In selecting membership nominees, attention must be given to the conflict of interest considerations discussed in section IV of the guidance. Pursuant to DOE policy, employees of Management and Operating (M&O) and Management and Integration (M&I) DOE contractors may be appointed only when necessary to achieve balance or diversity on a local board. Such individuals must receive a written waiver from the DOE Committee Management Officer. **DOE Manual § IV. 3.b**

The EM SSAB Charter states that "Board membership shall reflect a full diversity of viewpoints in the affected community and region and will be composed primarily of people who are directly affected by DOE site clean-up activities." **EM SSAB Charter § 12. B.**

In order to achieve balance required by FACA, the CFR and DOE Policy, EM nomination and appointment of members shall be accomplished using procedures designed to ensure a diverse board membership and a balance of representative viewpoints, including, but not limited to, the following:

- Statistics from the U.S. Census Bureau serve as guidance for comparing board membership with diversity in the affected community and region. Board members are typically drawn from stakeholder groups and organizations, such as
  - Residence in an area potentially affected by EM cleanup activities
  - Local governments
  - Tribal governments
  - Environmental and public health organizations
  - Labor organizations
  - Educators
  - Tribal, Hispanic and other Minority organizations
  - Business groups
  - Civic groups. **DOE Manual § IV. 3.a 2.**

- Federal, state, tribal and local government officials are encouraged to recommend prospective members for the local EM SSAB to EM.
- The Assistant Secretary or DOE Field Managers may request that other federal, state, or tribal organizations name liaisons to the EM SSAB to provide information and represent their agency's interests at local meetings. Liaisons may attend and participate in board meetings, but do not have voting privileges and are not included in a quorum.

<u>Member Appointment and Reappointment</u>

In accordance with FACA and the CFR,

- Membership terms are at the sole discretion of the appointing or inviting agency. **41 CFR § 102-3.130(a)**

In accordance with the DOE Manual 515.1-1,

- Appointments should be staggered. **DOE Manual § IV.2.e.1**

- GC and the CMO will review nominations to the Board to ensure compliance with FACA requirements, as well as GSA and departmental requirements. **DOE Manual § I.6.g, IV.2.b**
- EM must include the following information in member nomination packages (see **DOE Manual § IV. 5.a**):
  - A memorandum from the field manager to the Assistant Secretary for EM recommending the nominees for membership;
  - A copy of the current charter;
  - Up-to-date biographies for all proposed and continuing members;
  - The names and companies of DOE M&O and M&I contractor employees requiring letters of exception to serve on the Board;
  - The names and companies of other DOE contractor employees or consultants proposed to serve on the Board;
  - Recruitment efforts conducted to attract new members in the current membership drive;
  - Completed membership criteria matrices for proposed and current members; and
  - Letters of invitation to each member for signature by the Assistant Secretary.
- The Secretary of Energy has delegated authority for EM SSAB member appointments and reappointments to the Assistant Secretary for EM. In limited cases (specifically, for interim appointments to replace members who are not serving out their terms) and with prior coordination with the EM Office of Intergovernmental and Community Activities and the DOE Office of General Counsel, the authority to appoint has been delegated to the Field. (See § III.c.3. below.)
- Appointments and reappointments require concurrence from the Office of Intergovernmental and Community Activities, GC, MA, and the CMO. **DOE Manual § IV.5.b**
- DOE retains appointment and removal authority. **DOE Manual § IV.2.g**

To enhance compliance with FACA, the CFR and DOE policy, EM requires that

- DOE field offices provide electronically to the DFO a draft package, no less than 18 weeks in advance of the expiration dates for reappointments or desired appointment dates for new appointments.
- DOE field offices provide a formal package, no less than 16 weeks in advance of the expiration dates for reappointments or desired appointment dates for new appointments. This formal package should be submitted electronically to the DOE Headquarters' designee via the EM Correspondence Center.
- The DFO shall oversee the production of all other aspects of the membership package.

<u>Delegated Authority to the Field for Member Appointments</u>

To enhance compliance with FACA, the CFR and DOE policy, the Assistant Secretary for EM has delegated limited authority to appoint new EM SSAB members to the DOE operations, field and area offices, with prior coordination with the Office of Intergovernmental and Community Activities and the Office of General Counsel.

- The field can replace members who have resigned with time remaining in their membership terms under the following terms and conditions:
    - The appointments can be made *only* for the remainder of the previous member's term
    - No more than 20% of members can be appointed by any one site in any given calendar year
    - When appointing new members under this delegated authority, DOE field office managers must comply with FACA, GSA and DOE regulations, including appropriate conflict-of-interest restrictions.
- The Office of Intergovernmental and Community Activities must be advised of all such appointments, and all relevant information must be provided (i.e., name, contact information, biography, and matrix information) to it in a timely manner.

Removal and Resignation of Members

DOE operations, field offices, and area offices may recommend to the Designated Federal Officer that local board members be removed from the EM SSAB as deemed necessary in order to carry out the mission of the EM SSAB. As members serve at the pleasure of the Assistant Secretary for EM, recommendations for removal must be approved by the Assistant Secretary, after concurrence by the Designated Federal Officer. (See section II.D of this guidance for EM SSAB member roles and responsibilities.)

To enhance compliance with FACA, the CFR and DOE policy, EM requires that

- Members who wish to resign from the Board are requested to submit a letter to the Assistant Secretary for EM, with copies to the DDFO, the local EM SSAB Chair, and DFO in the Office of Intergovernmental and Community Activities.

Community Education and Member Recruitment

To enhance compliance with FACA, the CFR and DOE policy, EM requires that

- Field office staff ensures that the community is aware of and engaged in local board activities.
- DDFOs and Federal Coordinators ensure that board activities are appropriately coordinated with other field office public involvement activities.
- The board members represent a full diversity of viewpoints that is reflective of the community from which the board draws its members. Recruitment efforts should be targeted to achieve diversity through consideration of the communities affected by DOE's cleanup activities and the individuals who reside in those communities.
- Community education and membership recruitment efforts may include, but are not limited to: new media tools, targeted mailings, speaking engagements, recruiting tables at public events, notices in newsletters, press releases, advertisements in local and regional papers, advertisements on websites, and radio and television advertisements.

## IV. Conflict of Interest

Members of the EM SSAB are not considered to be Federal employees. There are however, conflict-of- interest restrictions that apply to members in order to protect the integrity of the EM SSAB and the credibility of its work product. As a matter of policy, DOE requires that representative members be recused from working on matters before the advisory committee in which they have a direct financial interest. DOE also requires that members not use their position on the Board for their private gain or for the gain of others and not to accept gifts given because of a member's position on the Board. The purpose of such policy is to maintain the integrity of the Board's work.

Generally, employees of a non-M&O or a non-M&I contractor do not have an inherent or inevitable conflict of interest that prohibits them from serving on the EM SSAB. However, certain EM prime contractors may create a conflict of interest for their employee members. The DFO, DDFO, and Federal Coordinator must be mindful that if a matter concerning a contractor in which a member has a direct financial interest arises, recusal from the discussion and voting would be required as this constitutes a conflict of interest.

Appointing or reappointing local board members, such as DOE M&O and M&I contractor employees, who may reasonably be expected to have a potential conflict of interest regarding certain issues that might be considered by the board, is permissible when necessary to achieve balance or diversity on a local board. In the event of such an appointment, the CMO must sign a letter of exception allowing this individual to serve on the board. A statement that thoroughly describes the individual's potential conflict of interest and explains why this individual's appointment is deemed essential must be included in the memorandum from the operations office manager in the board's membership package.

If such a member is appointed, the local site DDFO is required to take special care to ensure that the appointment of this member will not result in a conflict of interest or appearance of such conflict which can lead to actual bias, or perception of possible bias, in the review of DOE activities or projects. This individual will be informed of the general conflict of interest provisions and asked to disclose the potential or actual conflict of interest and recuse him/herself from voting on issues that would have a direct and predictable effect on his/her employing organization, represented group (s) or other entities with which he/she is associated or in which he/she has a financial, professional, or private interest or will receive either tangible or intangible benefits. All members should advise the local board chair and the DDFO of a potential or actual conflict in advance of any discussion of such a topic and, at the time of the discussion, make their potential or actual conflict of interest a matter of record. In the event of a potential or actual conflict of interest, a statement is required to be included in the local site board minutes detailing the conflict, and the action taken to remove it. In the case of a potential or actual conflict of interest arising during a subcommittee meeting, the individual with the conflict will report it to the subcommittee chair, who will report it to the DDFO.

The Assistant General Counsel for General Law reviews new member qualifications for conflict-of-interest issues and proposed mid-term replacements (section III.C.3 of the guidance). If a proposed mid-term appointment exhibits a potential conflict or conflict of interest, the local DDFO must provide the field general counsel with any relevant materials and consult with the Designated Federal Officer and the Office of the Assistant General Counsel for General Law if necessary.

All Board members must adhere to the following general conflict-of-interest requirements:

- A member shall refrain from any use of his or her membership, which is, or gives the appearance of being, motivated by the desire for private, professional, or financial gain;
- A member shall not use either directly or indirectly for private or professional gain for him/herself or for his/her represented group any inside information obtained as a result of advisory committee service;
- A member shall not use his or her position in any way to coerce or give the appearance of coercing another individual to provide a financial benefit to the member with the conflict of interest or any person with whom that member has family, business, or financial relationships;
- A member shall recuse him or herself from decisions and discussions related to real or perceived conflicts of interest, act impartially, and avoid the appearance of impropriety;
- A member shall not create situations that may result in conflicts of interest or questions regarding the objectivity and credibility of the Board process; and
- A member should seek immediate guidance, beginning with the local DDFO, if he or she is offered anything of value such as a gift, gratuity, loan, or favor in connection with advisory committee service.

In addition, for the potential conflict-of-interest situation where an EM SSAB Board member is a party in a legal action against the Department, or where a Board member is a member of an organization that is a party in a legal action, the individual's continued membership on the Board will be considered by the DFO on a case by case basis, in consultation with both the Office of General Counsel at DOE HQ and the Office of Chief Counsel at the DOE operations, field, or site office.

## V. Funding and Other Support

In 1997, funding of the local boards under the EM SSAB became the responsibility of the DOE field offices. Accordingly, DOE field office managers provide adequate funding to local boards to enable them to operate efficiently and effectively.

In accordance with FACA and the CFR,

- DOE will provide adequate support services as necessary. **FACA § 12(b); 41 CFR § 102-3.95(a)**

To enhance compliance with FACA, the CFR and DOE policy, EM requires that

- EM SSAB procurement mechanisms will be structured and managed to ensure proper stewardship of this stakeholder activity and to increase accountability and visibility of resources provided and subsequently used. The three options for funding administrative support for the EM SSAB are
    - Non-Profit Organization (Section 501(c) of the IRS Code)
    - Direct DOE Federal Management and Support
    - Support Services Contract with a Section 8(a) Small Business.

To enhance compliance with FACA, the CFR and DOE policy, EM requires that:

- Adequate support services may include, but are not limited to
    - Office space
    - Necessary supplies and equipment
    - Federal staff support
    - Coordination of meetings and agendas
    - Coaching for members and presenters
    - Support monitoring emerging issues and activities
    - Funding for an independent facilitator if necessary to ensure that Board members set and reach objectives, maintain focus, work as a team, strive for consensus, and operate at maximum efficiency and
    - Funding for independent technical reviews of key issues or ongoing technical assistance to the board. However, field offices should ensure that technical assistance funding is used to complement, rather than duplicate, the technical programs of DOE and its regulating agencies.
- Field office managers, through the DDFO and Federal Coordinator, must work closely and cooperatively with their local EM SSAB to develop a budget that is consistent with the Board's mission, scope, and annual work plan.
- After the work plan is approved by the DDFO, the DOE operations field office or area office should provide sufficient funding to carry out the work plan.
- DDFOs and Federal Coordinators should report the level of funding, including technical assistance funding, to the Designated Federal Officer in the form of an Annual Comprehensive Review of all EM SSAB activities at the end of each fiscal year.

# VI. Compensation and Travel Expenses

A. Board Service Is Not Compensable

The DOE **Manual § IV.4.d** provides that special Government employees (SGEs) serving on advisory committees may be compensated for government service. DOE, however, does not compensate members of Federal advisory committees serving as SGEs, nor do representatives serving on Federal advisory committees receive compensation. Individuals serving on the EM SSAB are not eligible for compensation.

B. Travel Reimbursements

FACA and the CFR provide that advisory committee members, while engaged in the performance of their duties away from their homes or regular places of business, "may be allowed travel expenses, including per diem in lieu of subsistence" to the same extent that is allowed for Federal employees. **FACA § 7(d)(1)(B); 41 CFR 102-3.130(k).** Moreover, the payment of additional travel expenses may be authorized to provide reasonable accommodation for a board member with a disability or special physical need, provided that the member's disability or special physical need is clearly visible and discernible or substantiated in writing by a competent medical authority, in accordance with Federal Travel Regulations. **41 CFR § 301-13.2 and 102-3.130(l)**

In accordance with the DOE Manual 515.1-1,

- (Coverage) Members will be reimbursed for travel expenses and per diem only when they are on site approved committee business while away from their residence or regular places of business. **DOE Manual *§* VI.3.a**
- (Tickets) Generally, DOE will provide members with a Government fare common carrier ticket. If DOE is unable to provide a member with a common carrier ticket, the member may use personal means to purchase transportation, but when costs exceed $100, a senior DOE official is required to review the circumstances of the purchase before reimbursement, which may not exceed the Government authorized fare. **DOE Manual § VI. 3.b**
- (Major travel to and from meetings) Airfare is limited to the regular, round trip, coach-class fare or, when available, Government contract airlines between the member's residence or regular place of business and the meeting site. Train travel is authorized when it is advantageous to the Government. A member may also travel to and from the meeting in his/her private vehicle, and DOE will reimburse the member at the mileage allowance rate and for fees. **DOE Manual § VI.3.c**
- DOE will reimburse members for lodging, meals, and incidental subsistence expenses associated with site approved travel for meetings using a per diem allowance (i.e., a daily payment instead of reimbursement for actual expenses). **DOE Manual § VI.3.e**

To enhance compliance with FACA, the CFR and DOE policy, EM requires that

- Members with questions on travel requirements or reimbursements should consult with the local field office prior to commencing travel or completing the reimbursement voucher.
- In addition, DDFOs and Federal Coordinators are responsible for determining, after consultation with appropriate offices and/or individual at their field sites, whether it is appropriate to fund official travel for non-members to specific EM SSAB-related activities, and, if so, how it should be funded.
- Funding and compensation for travel is considered part of the annual budget allocation for the local board.

## VII. Board Termination

In accordance with FACA and the CFR,

- All local boards operate under the EM SSAB Charter, which is renewed biennially. If that charter is not renewed, all local boards will terminate automatically. **FACA § 14, 41 CFR § 102-3.55(a)**
- Pursuant to **41 CFR 102-3.30(b),** the EM SSAB and/or local boards terminate when
    - The stated objectives of the board have been accomplished;
    - The subject matter of work of the board has become obsolete by the passing of time or the assumption of the board's functions by another entity; and/or
    - DOE determines that the cost of operation is excessive in relation to the benefits accruing to the federal Government.

To enhance compliance with FACA, the CFR and DOE policy, EM requires that

- Once the EM mission is completed at a site where there is a local board under the EM SSAB Charter, the local board will be terminated upon physical and/or regulatory closure
- Other criteria for termination include the criteria in FACA and the CFR. The decision to terminate a committee may include a determination that the advice is no longer essential to EM or is no longer in the public interest; that the committee has not been staffed for one year; or that the committee has not met for a two-year period. **DOE Manual § III.8.a**
- If the chartered purpose for a local board cannot be fulfilled, the DDFO, in consultation with DFO and members of the local EM SSAB, will prepare a timetable for disestablishing the local board. The resulting termination package will be sent through the same concurrence chain as a member appointment package.
- The package, to be signed by the field office manager at the local board's site, should note the reasons for the board's suggested termination, as well as its accomplishments over the years

In accordance with the DOE Manual,

- Letters of appreciation from the Assistant Secretary to the Board members for services rendered must be included in the termination package. **DOE Manual § III.8.b.1**

## VIII. Acronyms & Definitions

**CFO** Chief Financial Officer
**CFR** Code of Federal Regulations
**CMO** Committee Management Officer
**DDFO** Deputy Designated Federal Officer
**DFO** Designated Federal Officer
**DOE** U.S. Department of Energy
**EM** Office of Environmental Management
**EM SSAB** Environmental Management Site-Specific Advisory Board
**EM-1** Assistant Secretary for EM
**EPA** Environmental Protection Agency
**FACA** Federal Advisory Committee Act
**FTR** Federal Travel Regulations
**GC** General Counsel
**GSA** General Services Administration
**MA** Office of Management
**NE** Office of Nuclear Energy
**NNSA** National Nuclear Security Administration
**MA** Office of Management and Administration
**OMB** Office of Management and Budget
**SC** Office of Science

Advisory Committee: any committee, board, commission, council, conference, panel, task force, or other similar group, or any subcommittee or other subgroup thereof which is established by statute, established or utilized by the President, or established or utilized by one or more agencies, in the interest of obtaining advice or recommendations for the President or one or more agencies or officers of the Federal Government. **FACA § 3(2)**

EM SSAB Charter: The governing document for the EM SSAB, including all local boards, which is renewed biannually and approved by the CMO.

DOE Field Office(s): Any DOE area, field, and site offices, and/or business centers located outside the Washington, D.C. area.

DOE Manual: "Advisory Committee Management Program" Manual, DOE M 515.1-1, 10/22/07

## IX. Applicable Law, Regulations, Orders and Policies

Statutes: Federal Advisory Committee Act (FACA), 5 U.S.C. App. 2 (1997) (original version at Pub. L. No. 92-463, 86 Stat. 770 (1972))

http://www.gsa.gov/portal/content/104514

Regulations: Federal Advisory Committee Management, 41 CFR Part 102-3. See also: 52 Fed. Reg. 45926 (1987). http://www.access.gpo.gov/nara/cfr/waisidx_99/41cfr105-54_99.html

Specific Agency Regulations: Office of Human Resources and Administration, U.S. Department of Energy (DOE), Pub. No. DOE M 515.1-1, *Advisory Committee Management Program* (2007) (DOE Manual). https://www.directives.doe.gov/directives/0515.1-DManual-1/view

Charter: Office of Environmental Management, Office of Intergovernmental and Community Activities, U.S. Department of Energy Amended Charter: Environmental Management Site-Specific Advisory Board (2012).

http://energy.gov/sites/prod/files/em/EMSSABCharter-FINAL.pdf

Delegations:

- Department of Energy Delegation Order No. 00-002.00B to the Under Secretary for Energy, Science, and Environment (October 4, 2004).
- https://www.directives.doe.gov/sdoa/delegations-documents/002.00B/view

- Department of Energy Re-delegation Order No. 00-002.03B to the Assistant Secretary for Environmental Management (January 29, 2007).
- https://www.directives.doe.gov/sdoa/delegations-documents/002.03B/view

**Abbreviations/Acronyms List for Environmental Management Project Update**

*This list is not exhaustive – if you ever run across an unfamiliar term, please ask!*

AM – action memorandum

ACM – asbestos containing material

ARARs – Applicable or Relevant and Appropriate Requirements

ARRA – American Recovery and Reinvestment Act

BCV – Bear Creek Valley

BG – burial grounds

BV - Bethel Valley

CARAR – Capacity Assurance Remedial Action Report

CART - carbon steel casing dollies

CBFO – Carlsbad Field Office

CERCLA – Comprehensive Environmental Response, Compensation and Liability Act

CEUSP – Consolidated Edison Uranium Solidification Project

CD – critical decision

CH – contact handled

CNF – Central Neutralization Facility

COLEX – column exchange

CS – construction start

CY – calendar year

D&D – decontamination and decommissioning

DARA – Disposal Area Remedial Action

DNAPL – Dense Non-Aqueous Phase Liquids

DOE – Department of Energy

DSA – documented safety analysis

DQO – data quality objective

EE/CA – engineering evaluation/cost analysis

EFPC – East Fork Poplar Creek

EM – environmental management

EMDF – Environmental Management Disposal Facility

EMWMF – Environmental Management Waste Management Facility

EPA – Environmental Protection Agency

EQAB – Environmental Quality Advisory Board

ETTP – East Tennessee Technology Park

EU – exposure unit

EV – earned value

FACA – Federal Advisory Committee Act

FCAP - Facilities Capability Assurance Program

FFA – Federal Facility Agreement

FFS – Focused Feasibility Study

FPD – federal project director

FY – fiscal year

GIS – geographical information system

GW – groundwater

GWTS – groundwater treatability study

HQ – Headquarters

HRE – Homogenous Reactor Experiment

IROD – Interim Record of Decision

ISD - In-Situ Decommissioning

LEFPC – Lower East Fork Poplar Creek

LLW – low-level waste

MLLW – mixed low-level waste

MSRE – Molten Salt Reactor Experiment

MTF – Mercury Treatment Facility

MV – Melton Valley

NaF – sodium fluoride

NDA – non-destructive assay

NEPA – National Environmental Policy Act

NNSS – Nevada National Security Site (new name of Nevada Test Site, formerly NTS)

NPDES – National Pollutant Discharge Elimination System

NPL – National Priorities List

OR – Oak Ridge

ORGDP – Oak Ridge Gaseous Diffusion Plant

OREIS – Oak Ridge Environmental Information System

OREM – Oak Ridge Office of Environmental Management

ORNL – Oak Ridge National Laboratory

ORO – Oak Ridge Office

ORR – Oak Ridge Reservation

ORRR – Oak Ridge Research Reactor

ORRS – operational readiness reviews

PaR – trade name of remote manipulator at the Transuranic Waste Processing Center

PCB - polychlorinated biphenyls

PCCR – Phased Construction Completion Report

PM – project manager

PP – Proposed Plan

PPE – Personal Protective Equipment

QAPP – Quality Assurance Project Plan

RA – remedial action

RAR – Remedial Action Report

RAWP – Remedial Action Work Plan

RCRA – Resource Conservation Recovery Act

RDR – Remedial Design Report

RDWP – Remedial Design Work Plan

RER – Remediation Effectiveness Report

RH – remote handled

RI/FS – Remedial Investigation/Feasibility Study

RIWP – Remedial Investigation Work Plan

RmAR – Removal Action Report

RmAWP – Removal Action Work Plan

ROD – Record of Decision

RSE – Remedial Site Evaluation

RUBB – trade name of a temporary, fabric covered enclosure

S&M – surveillance and maintenance

SAP – sampling analysis plan

SEC – Safety and Ecology Corp.

SEP – supplemental environmental project

STP – site treatment plan

SW – surface water

SWSA – solid waste storage area

Tc – technetium

TC – time critical

TDEC – Tennessee Department of Environment and Conservation

TRU – transuranic

TSCA – Toxic Substances Control Act

TWPC – Transuranic Waste Processing Center

U – uranium

UEFPC – Upper East Fork Poplar Creek

UPF – Uranium Processing Facility

URS/CH2M – (UCOR) DOE's prime cleanup contractor

VOC – volatile organic compound

VPP – Voluntary Protection Plan

WAC – waste acceptance criteria

WEMA – West End Mercury Area (at Y-12)

WHP – Waste Handling Plan

WIPP – Waste Isolation Pilot Plant

WRRP – Water Resources Restoration Program

WWSY – White Wing Scrap Yard

Y-12 – Y-12 National Security Complex

ZPR – Zero Power Reactor

# OAK RIDGE OFFICE OF ENVIRONMENTAL MANAGEMENT

*Remediating, Modernizing, Reindustrializing*

OREM
Oak Ridge Office of Environmental Management

**The Oak Ridge Reservation is home to three campuses that have a rich history of research, innovation, and scientific discovery that shaped the course of the world. Unfortunately, today, despite their vitally important missions, they are hindered by environmental legacies remaining from past operations.**

The Oak Ridge National Laboratory (ORNL), Y-12 National Security Complex (Y-12), and East Tennessee Technology Park (ETTP) house aging facilities and waste that was generated during research and operations during the World War II Manhattan Project and Cold War.

The Oak Ridge Office of Environmental Management (OREM), a U.S. Department of Energy (DOE) field site created in the late 1980s, was formed to address and remove these diverse legacies and risks to protect the region's health and environment, ensure the continuation of vital federal missions, and make clean land available for future use.

## REMEDIATION

OREM's cleanup process focuses on protecting the health and safety of East Tennessee's environment, workers, and residents by removing old, contaminated facilities and addressing affected soil and groundwater on the Department of Energy's 32,000-acre Oak Ridge Reservation.

## MODERNIZATION

OREM enables the progress of DOE's ongoing national security, energy, and science missions by clearing away aging, hazardous infrastructure and opening valuable real estate to house future federal missions that will support the nation.

## REINDUSTRIALIZATION

As OREM completes cleanup projects, its reindustrialization program works to transfer property and facilities to the private sector—creating new opportunities for economic growth in Oak Ridge.

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March 2020

# FINISHING THE JOB SAFELY

**OREM is committed to completing cleanup on the Oak Ridge Reservation, enabling new federal missions and economic opportunities for the community.**

## East Tennessee Technology Park

Work is underway to transform this former government-owned **uranium enrichment complex** into a multi-use industrial park that benefits the region's economy. This massive cleanup project will be the largest completed by the Department of Energy. When OREM completes demolition in 2020, it will have eliminated more than 13 million square feet of contaminated, deteriorated structures. This project marks the first time in the world an entire enrichment complex has been removed.

*Demolition of Building K-1037*

OREM has transferred nearly 1,300 acres of land to the community for reuse and economic development. Another 600 acres are slated for transfer as cleanup is completed. This area is now home to 20 private businesses, and it has many of the amenities needed to attract major industry to Oak Ridge in the years ahead.

## Oak Ridge National Laboratory

OREM is responsible for addressing and removing more than **125 excess, contaminated facilities** in the central campus area that no longer serve a current DOE mission. More than thirty of those structures are considered high-risk due to structural, radiological, or chemical hazards. With cleanup nearing completion at the East Tennessee Technology Park, crews are transitioning to the Oak Ridge National Laboratory to begin large-scale cleanup activities at former research reactors and isotope production facilities.

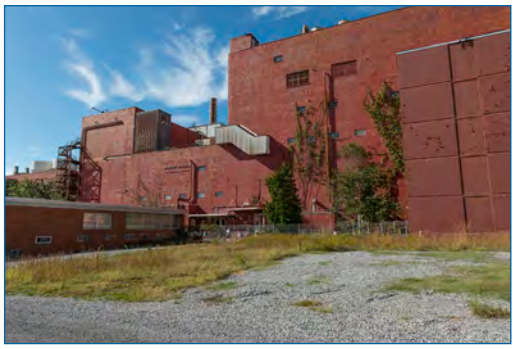
*Employees extract medical isotopes for next generation cancer research*

The **nation's supply of uranium-233** is housed at the Oak Ridge National Laboratory. Its removal from the site is OREM's highest priority project, and it will eliminate millions of dollars in oversight and security costs required to store the material safely. OREM removed half of the inventory in 2017, and processing operations are underway to convert the remaining inventory into a disposal-ready form. Through an innovative partnership with TerraPower, processing operations were able to begin a year ahead of schedule while the medical community received unique isotopes for next generation cancer research. OREM is scheduled to finish processing the remaining material in 2025.

## Y-12 National Security Complex

Y-12 has more than 90 excess, contaminated facilities awaiting demolition. Of those, more than 25 are considered high-risk, and a portion of those were deemed "the worst of the worst" in the entire DOE complex in a report to Congress. Before demolition can begin on some of the site's largest Cold War-era buildings, OREM must complete construction on the **Mercury Treatment Facility** to reduce concentrations of the element in surface waters and capture mercury disturbed during cleanup. After massive structures are cleared away in the western portion of Y-12, OREM will be able to remove the sources of mercury that are trapped in the soil and groundwater beneath these large buildings.

OREM is already ramping up efforts to address risks and hazards at the site. Workers retrieved more than 10,000 pounds of mercury from old equipment, preventing a potential environmental release. Also, crews will finish demolishing the **Biology Complex** in 2021. Completing this project eliminates five high-risk buildings and clears land for new national security missions.



*Demolition of the Biology Complex eliminates five high-risk buildings*

Continued cleanup and disposal of these buildings will require the construction of an additional disposal facility to contain waste in a safe and environmentally sound way. The current facility near Y-12 is projected to reach its capacity in the early to mid-2020s. A new **Environmental Management Disposal Facility** will be needed to complete the remaining cleanup at the Oak Ridge National Laboratory and Y-12 in a safe, efficient manner.

DOE Oak Ridge Environmental Management Program

# History of the Oak Ridge EM Program

OREM
Oak Ridge Office of Environmental Management

## 1980

- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) becomes law and provides broad federal authority to address potential releases of hazardous substances.

## 1985

- Uranium enrichment operations at the Oak Ridge K-25 Gaseous Diffusion Plant (now known as East Tennessee Technology Park) are halted.

## 1987

- The Oak Ridge K-25 Gaseous Diffusion Plant is permanently shut down.

## 1989

- DOE establishes the Office of Environmental Management (EM) to oversee the cleanup of hazardous materials at DOE facilities throughout the United States, including the Oak Ridge Reservation.
- The Oak Ridge Reservation is placed on the National Priorities List, identifying it to be cleaned up under the provisions of CERCLA.

## 1991

- The Toxic Substances Control Act (TSCA) Incinerator begins operation at the Oak Ridge K-25 Site. It is the only incinerator in the nation capable of incinerating wastes containing PCBs.

## 1992

- The Oak Ridge Reservation Federal Facility Agreement is enacted. It is a CERCLA-required cooperative agreement among DOE, the Environmental Protection Agency, and the Tennessee Department of Environment and Conservation to promote cooperation and participation of the three parties in cleaning up the Oak Ridge Reservation.

## 1993

- A Citizens Working Group is formed to provide feedback to DOE on potential remedial alternatives for the cleanup of Lower East Fork Poplar Creek, which would become one of the first major cleanup efforts in Oak Ridge. Public input into the remediation was the catalyst for modifying cleanup levels, resulting in less cost and less environmental disruption from excavation.

## 1995

- Records of Decision are issued for remediation of Lower East Fork Poplar Creek and Lower Watts Bar Reservoir.
- DOE establishes the Oak Ridge Site Specific Advisory Board (ORSSAB) under the Federal Advisory Committees Act. The ORSSAB is a federally appointed citizens panel that provides advice and recommendations to DOE's Environmental Management Program.

## 1996

- First lease of a K-25 Site facility is signed between the Community Reuse Organization of East Tennessee (a DOE leasing agent) and a private company. DOE's goal is to eventually convert the site into a self-sustaining private industrial park.

# History of the Oak Ridge EM Program (continued)

## 1997

- ORSSAB sponsors public meeting that results in the formation of the End Use Working Group, a diverse group of stakeholders tasked with developing recommendations for end uses of contaminated sites.
- Lower East Fork Poplar Creek remediation is completed.
- Records of Decision are issued for removal of sludge from gunite tanks at Oak Ridge National Laboratory (ORNL), remediation of Surface Impoundments at ORNL, remediation of Clinch River/Poplar Creek, and remediation of Union Valley Groundwater Plumes.

## 1998

- Bechtel Jacobs Company LLC becomes the prime cleanup contractor for the Oak Ridge Reservation, replacing Lockheed Martin Energy Systems Inc.
- End Use Working Group issues two reports: *Final Report of the Oak Ridge Reservation End Use Working Group* and *The Oak Ridge Reservation Stakeholder Report on Stewardship.*

## 1999

- The ORSSAB forms the Stewardship Working Group to address issues associated with long-term stewardship on the Oak Ridge Reservation. The group produces *The Oak Ridge Reservation Stakeholder Report on Stewardship, Vol. 2.*
- The ORSSAB hosts the National Site Specific Advisory Board Meeting on Stewardship with members from nine DOE site SSABs attending.

## 2000

- Removal of radioactive sludge from a series of underground gunite tanks at ORNL is completed.
- Records of Decision are issued for the Melton Valley Watershed and Bear Creek Valley Watershed.

## 2001

- Ground is broken for the Environmental Management Waste Management Facility (EMWMF), an on-site CERCLA disposal cell that will handle contaminated waste generated from Oak Ridge Reservation cleanup. The facility would begin accepting waste in 2002.

## 2002

- DOE announces that the Oak Ridge Reservation will be cleaned up on an accelerated schedule, with high-risk areas to be addressed first. Areas covered in the Melton Valley Record of Decision are scheduled to be remediated by 2006, East Tennessee Technology Park by 2008, and the Balance of Reservation by 2015.
- The DOE Information Center opens, consolidating the services of the DOE EM Information Resource Center and the DOE Public Reading Room.
- Records of Decision are issued for Bethel Valley Watershed and Upper East Fork Poplar Creek sediments.

## 2003

- Bechtel Jacobs Company LLC is selected to implement DOE's accelerated cleanup plan.
- Transuranic Waste Processing Facility is constructed.
- All spent nuclear fuel is shipped from the Oak Ridge Reservation to various locations for safe disposal.
- Excavation of the K-1070-A Burial Ground at East Tennessee Technology Park (ETTP) is completed.
- Record of Decision is issued for ETTP Zone 1 soil remediation.

# History of the Oak Ridge EM Program (continued)

## 2004

- Shipments begin of more than 6,000 depleted uranium hexafluoride cylinders from ETTP to Portsmouth, Ohio, for disposition.
- ETTP Scrap Waste Removal Project begins work on removing approximately 47,000 tons of scrap metal from the site.
- Cleanup of Atomic City Auto Parts is completed. The site was used as a coal distribution center by the Manhattan Project.
- Transuranic Waste Processing Facility begins operation.

## 2005

- Remediation of Blair Quarry is completed. The quarry was created in the early 1940s by excavating into McKinney Ridge. The rock material was used to support construction of the K-25 Site. It was later used for open burning of trash and debris.
- Numerous buildings at ETTP, including the former cafeteria (K-1002) and medical facility (K-1003), are demolished as part of the ETTP Decontamination and Decommissioning Project.
- Phase 1 of David Witherspoon Inc. 901 Site cleanup, which included building decontamination, demolition, and debris removal, is completed. The site previously received scrap radioactive and hazardous materials from federal operations in Oak Ridge.
- Construction begins on a haul road from ETTP to EMWMF so that wastes generated in the cleanup of ETTP can be shipped to the disposal facility without traveling on public roadways.
- Record of Decision is issued for cleanup of the Zone 2 portion of ETTP, which includes the area within the main fence of the plant.
- Expansion of EMWMF (Cells 3 and 4) is completed, adding 800,000 $yds^3$ of disposal capacity.
- Four office buildings totaling 200,000 $ft^2$ are transferred to Community Reuse Organization of East Tennessee (CROET).
- Bechtel Jacobs Company achieves the first major milestone of its Accelerated Cleanup contract with DOE: disposal of low-level and mixed legacy waste from the Oak Ridge Reservation.
- Site Specific Advisory Board celebrates 10-year anniversary.
- Building 3019 Project at ORNL is transferred to EM program.

## 2006

- The ETTP-to-EMWMF haul road opens.
- Building K-29, one of the large gaseous diffusion buildings, is demolished and debris removed.
- Melton Valley remediation is completed. Activities include cleanup and containment of various storage areas that accepted waste from ORNL operations. This achievement marks the successful completion of Bechtel Jacobs Company's second major Accelerated Cleanup milestone.
- Demolition of several facilities in the laboratory and main plant area of ETTP is completed as part of the ETTP Decontamination and Decommissioning Project.
- Project personnel completes shipment off-site of the last of the 6,000 depleted uranium hexafluoride cylinders located at ETTP.
- Site Specific Advisory Board receives national Citizens Excellence in Community Involvement Award.
- Two office buildings totalling 93,000 $ft^2$ are transferred to the CROET.

# History of the Oak Ridge EM Program (continued)

## 2007

- Demolition of Building K-1401, a 500,000-square-foot former maintenance facility in the center of ETTP, is completed.
- Demolition of K-1320, an office building at ETTP, is completed.
- Demolition of the K-1501 ETTP Steam Plant facility is completed. The 2.5-year project, which involved 42,000 labor hours and more than 12 million pounds of waste shipped, concludes with no accidents.
- The haul road project, which connects ETTP to EMWMF, receives a Best in Class Pollution Prevention Award from DOE Headquarters Office of Environmental Management.
- Expansion of EMWMF (Cells 3 and 4) is completed, adding 800,000 $yds^3$ of disposal capacity.
- Parcels ED-5 and ED-7, totalling 23 acres, are transferred to CROET.

## 2008

- ETTP Fire Station is transferred to the City of Oak Ridge.
- The last of the nuclear fuel is removed from its storage tank at the Molten Salt Reactor Experiment.
- Field work at the Witherspoon 1630 Site in South Knoxville is completed.
- Demolition of Building K-1401, a former maintenance facility at ETTP, is completed.
- Demolition of the K-25 Building west wing begins.

## 2009

- $755 million is provided to DOE Oak Ridge Office for cleanup projects under the American Recovery and Reinvestment Act.
- The TSCA Incinerator is shut down, completing 18 years of service in which 35 million pounds of wastes were treated.
- Demolition of Building K-1035, a 48,000 $ft^2$ former instrument shop, is completed.
- Recontouring and restoration activities are initiated for three contaminated ETTP ponds.
- CROET begins construction of two “spec” buildings at ETTP for prospective private tenants.

## 2010

- Demolition of the K-25 Building west wing is completed and demolition debris is removed.
- Tie line isolation of the K-33 Building is completed in preparation for demolition.
- Various streets at ETTP are transferred to the City of Oak Ridge and renamed.

# History of the Oak Ridge EM Program (continued)

## 2011

- Demolition of the K-25 Building's east wing begins.
- URS | CH2M Oak Ridge LLC (UCOR) becomes the prime cleanup contractor for the DOE Oak Ridge Reservation, replacing Bechtel Jacobs Company.
- Reindustrialization Program leases 282 acres to the Community Reuse Organization of East Tennessee as part of DOE's effort to convert ETTP into a private sector industrial park.
  Recontouring and restoration activities are initiated for three contaminated ETTP ponds.
- Demolition is completed on the K-33 Building at ETTP.
- Cleanup of the Old Salvage Yard at the Y-12 Complex is completed.

## 2012

- Demolition of the K-25 Building's east wing is completed, with the exception of a small portion on the southernmost end that is contaminated with technetium-99.
- Demolition begins on the K-25 Building's north end.
- Tank W-1A, the main source of groundwater contamination at ORNL, is removed.
- Mercury reduction efforts begin at the Y-12 Complex.
- Removal of legacy materials from Isotope Row at ORNL is completed.
- Cask Processing Enclosure is completed at the Transuranic Waste Processing Center.

## 2013

- Demolition of the K-25 Building's north end is completed.
- A second solar array, constructed by Vis Solis LLC on CROET property, is constructed at ETTP.
- Six NaF traps, the highest risk components still remaining, are removed from the K-27 Building.
- The conceptual design of the water mercury treatment facility at Y-12 is completed.

## 2014

- Demolition of the K-25 Building completed.
- Demolition begins on the K-31 Building.
- More than 3,500 cubic meters of legacy wastes disposed.
- Roof repairs completed on Alpha 4 building at Y-12.

# History of the Oak Ridge EM Program (continued)

## 2015

- New 1 megawatt solar array opens at ETTP under a partnership between Restoration Services Inc. and Vis Solis Inc.
- DOE submits a revised draft of the Remedial Investigation/Feasibility Study for a proposed new CERCLA landfill that will supplement the existing waste repository.
- Demolition of the K-31 Building completed.
- Radioactive components removed from Building 3042 at ORNL, a former reactor research facility.

## 2016

- Demolition of the K-27 Building completed.
- Preliminary design completed for the Outfall 200 Mercury Treatment Facility.
- EMWMF logs its 14th year without a lost workday away case.
- Process pipe removal begins at Alpha -4 Building at the Y-12 Complex.

## 2017

- Crews begin cleaning Alpha 4 COLEX equipment at Y-12 for demolition and removal.
- Risk reduction work conducted at ORNL's Building 3026 and Building 7500.
- Half of ORNL's Uranium-233 inventory disposed through Direct Disposition Campaign.
- Demolition of Buildings K-731, K-732, K-832, K-832-H, K-1203 completed at ETTP.
- Shipments of transuranic waste resume to WIPP for permanent disposal.
- Groundbreaking begins for Mercury Treatment Facility at Y-12.

## 2018

- Demolition of two high-risk Biology Complex facilities (Building 9743-2 and 9770-2) completed at Y-12.
- Demolition of the Central Neutralization Facility completed at ETTP.
- Demoltion of the TSCA Incinerator completed at ETTP.
- Demolition of K-633 Test Loop Facility completed at ETTP.
- Prep work completed for Mercury Treatment Facility at the Y-12 National Security Complex.
- Mercury removal completed at Y-12's Alpha 4 west end COLEX facilities.

# History of the Oak Ridge EM Program (continued)

## 2019

- Demolition of the K-1414 Garage completed at ETTP.
- Demolition of the K-1034-A Records Vault completed at ETTP.
- Demolition of the K-1037 building completed at ETTP.
- Coqui Radio Pharmaceutical Corp. announces it is building a multi-million-dollar medical isotope production facility at ETTP.
- K-29 building slab removed.
- Demolition underway on final two process buildings in the Poplar Creek area of ETTP.
- Construction begins on K-25 History Center.

# EAST TENNESSEE TECHNOLOGY PARK

OREM
Oak Ridge Office of Environmental Management

**FACT:** The 2,200-acre East Tennessee Technology Park (ETTP) operated Manhattan Project and Cold War-era uranium enrichment facilities for more than 40 years. The site, which began as a scientific marvel in 1943, became a legacy of contaminated buildings, soil, and groundwater after it was closed in 1987.

**CHALLENGE:** Restoring the environment requires extensive cleanup and building demolition. Without the Oak Ridge environmental cleanup program, risks would remain that prevent new development and economic growth regionally.

**SOLUTION:** The Oak Ridge Office of Environmental Management (OREM) coordinates the safe and efficient cleanup of ETTP, preparing the land for redevelopment. As cleanup occurs, the land is transferred to the private sector with the ultimate goal of transforming the site into a thriving, privately owned multi-use industrial park. OREM completed core cleanup at the site in 2020, and it expects to complete the remaining soil and groundwater remediation in the mid-2020s.

## OREM accomplishments at the East Tennessee Technology Park

*More than*
**500 Facilities Demolished**

**1,200+ Acres**
*transferred for private sector use*

**3,000 Acres**
*placed in conservation easement*

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### ETTP IS HOME TO 20 BUSINESSES, WITH MORE TO COME IN THE YEARS AHEAD

OREM recently transferred ETTP's largest parcel to date, spanning more than 200 acres. Coqui Radio Pharmaceuticals Corp. announced that it will build a medical isotope production facility on that land to focus primarily on the production of molybdenum-99 (Mo-99) isotopes. The projected $500 million investment will enable the construction of a new facility on the transferred land by 2025 that is anticipated to create 200 private sector jobs.

Mo-99 is the most widely used medical isotope in the world, but the U.S. currently does not have a domestic production source. It's used in 18 million medical procedures a year in the U.S., aiding in the diagnosis and treatment of cancer and numerous diseases.

## Reindustrialization & Historic Preservation

**OREM's goal for ETTP is to eliminate risks to human health and the environment, make clean land available for economic development, and preserve the international historical significance of the site.**

### PRESERVATION

An historic preservation agreement honors the 12,000 workers within the former K-25 complex (ETTP) who discovered the technological and scientific advancements that changed the course of the world during World War II and the Cold War. Under the agreement, OREM constructed and opened the K-25 History Center in 2020 with more than 250 original artifacts, interactive exhibits, and access to nearly 1,000 oral histories from the site's early workers. Also, a scale representation of the K-25 Building and gaseous diffusion technology will be constructed next to the history center.

### REINDUSTRIALIZATION

As OREM completes cleanup projects at ETTP, the reindustrialization program works to transfer buildings and land to the private sector. The goal is to fully convert the site into a privately-owned multi-use industrial park. ETTP is currently home to manufacturing, warehousing, and office space. ETTP boasts many offerings to potential industry searching for a new location including a well-maintained road system, railroad line, electrical transmission lines, emergency services, barge access, close proximity to two interstates, sidewalks, parking, and utilities.

# CLEANUP PRIORITIES FOR THE OAK RIDGE NATIONAL LABORATORY

OREM
Oak Ridge Office of Environmental Management

**FACT:** Oak Ridge National Laboratory (ORNL) is the largest science and energy national laboratory in the Department of Energy (DOE) system, performing research to find solutions to some of our country's most compelling energy and security problems. The site was first established to produce and separate plutonium for the Manhattan Project. These efforts, and other research over the decades, helped protect and advance our nation but resulted in contamination of ORNL's facilities and the environment.

**CHALLENGE:** Amid ORNL's modern facilities are a number of inactive, deteriorating, and contaminated buildings and stockpiles of legacy waste that pose potential risks to human health and the environment. They are costly to maintain in a safe and stable condition. The Oak Ridge Office of Environmental Management (OREM) must conduct cleanup and remediation activities while minimizing impacts to ongoing research missions at ORNL.

**SOLUTION:** OREM will coordinate the safe and efficient cleanup of the ORNL site – including building demolition, waste treatment and disposal, and soil and water remediation. This work eliminates risks, and it clears land for ORNL to conduct future research missions that can usher in the next big discovery.

## CLEANUP GOALS

Completing cleanup efforts at ORNL will protect human health and the environment, reduce facility and maintenance costs, and modernize one of DOE's most valuable assets.

**Treat, remove and dispose of** legacy materials and waste

**Demolish** more than 125 excess facilities (30+ are high risk)

**Remediate** contaminated soil, water and infrastructure

**Modernize** ORNL to enable future science and energy missions

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## CLEANUP PROJECTS

### FACILITY DECOMMISSIONING AND DEMOLITION (D&D)

125 building D&D projects are planned at the ORNL site, including more than 30 buildings that are categorized as high risk. These projects will enhance safety, modernize the site, and open land for future research missions.

### ADDRESSING EXCESS CONTAMINATED FACILITIES

Crews are actively addressing numerous facilities in ORNL's central campus area, which houses aging, former research reactors and isotope production labs. After installing a six-story protective cover to protect against potential impacts, workers are now tearing down the two remaining contaminated structures that were part of Building 3026. Deactivation is underway in three former research reactors—the Low Intensity Test Reactor, the Bulk Shielding Reactor, and the Oak Ridge Research Reactor, and teams are moving the Experimental Gas-Cooled Reactor to the 'cold and dark' state. OREM is also deactivating nine isotope research and productions labs this year. Together, these projects are paving the way for the next wave of demolitions that will remove risks and clear land for research missions at DOE's largest multi-program national laboratory.

### REMOVING INVENTORY OF HIGHLY ENRICHED FISSLE MATERIAL

OREM has removed approximately half of the inventory of uranium-233 stored in ORNL's Building 3019, which is the oldest operating nuclear facility in the world. Removing the rest of the highly enriched fissile material is the highest cleanup priority at ORNL, but first the material requires processing and downblending to convert it into a disposal-ready form.

Workers are currently using gloveboxes to process the low dose inventory. Part of this process involves extracting valuable medical isotopes that the private sector is using to advance next generation cancer treatment research. In 2021, OREM will complete the facility upgrades needed to begin processing and downblending the high dose portion of the inventory. This will mark a major step forward in this crucial project.

# CLEANUP PRIORITIES FOR THE Y-12 NATIONAL SECURITY COMPLEX

OREM
Oak Ridge Office of Environmental Management

**FACT:** Y-12 National Security Complex (Y-12) plays a key role in strengthening our country's national security by retrieving and storing nuclear materials, fueling the country's naval reactors, and reducing global threats. Formerly, Y-12 operated uranium enrichment and lithium separation facilities during the Manhattan Project and Cold War-era that protected our country but resulted in contamination of its facilities and the environment.

**CHALLENGE:** Contaminated and deteriorating facilities on the Y-12 site pose potential risks to employees and the environment, and they are costly to maintain. The Oak Ridge Office of Environmental Management (OREM) must conduct large-scale cleanup and remediation activities while minimizing impacts to ongoing national security missions at Y-12.

**SOLUTION:** OREM will coordinate the safe and efficient cleanup of the Y-12 site — including building demolition and soil and water remediation. This enables Y-12 to continue its national defense missions, achieve a smaller, modernized footprint, and create a safer environment for employees and the community.

## CLEANUP GOALS

Completing cleanup efforts at Y-12 will protect human health and the environment, reduce facility and maintenance costs, and support future missions.

**Remove and dispose of** legacy materials and waste

**Demolish** more than 90 excess facilities (25+ are high risk)

**Remediate** contaminated soil and water

**Modernize** Y-12's footprint

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January 2021

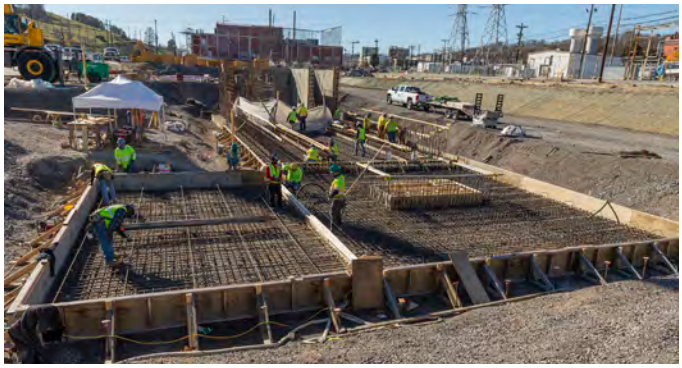
## CLEANUP PROJECTS

### FACILITY DECOMMISSIONING AND DEMOLITION (D&D)

D&D projects at Y-12 encompass 90 total buildings, including more than 25 that are categorized as high risk. Three buildings will be decontaminated/deactivated and kept for historical preservation, while the remaining buildings will be demolished to remove risks, enable modernization, and open land for important missions.

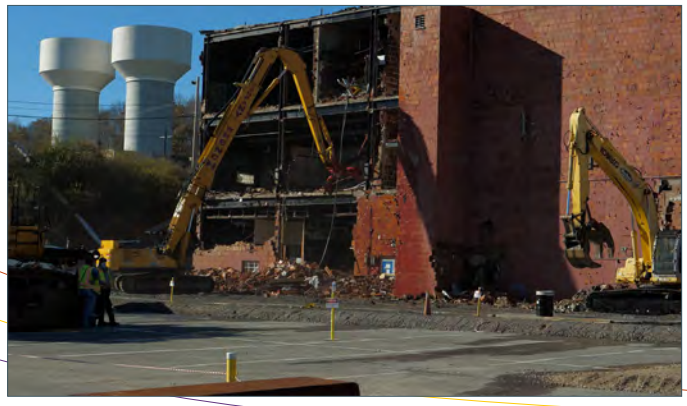
### ADDRESSING EXCESS CONTAMINATED FACILITIES

OREM is setting the stage for the next wave of demolitions by initiating numerous deactivation projects at Y-12. The largest projects involve two Manhattan Project-era facilities, Alpha-2 and Beta-1, that have a combined footprint of more than half a million square feet. Workers are also continuing to retrieve mercury and deactivate the Column Exchange process equipment located at Alpha-4. So far, crews have retrieved more than 10,000 pounds of mercury from the dilapidated equipment that was installed in the 1950s an operated through the 1960s. This effort has prevented a large release into the environment.



### WATER TREATMENT

Construction of the Outfall 200 Mercury Treatment Facility is underway and moving forward. This vital piece of infrastructure is the linchpin for OREM's cleanup strategy at Y-12. It is designed to safeguard against mercury releases in the Upper East Fork Poplar Creek during demolition of Y-12's large, deteriorated, mercury-contaminated facilities and subsequent soil remediation. When operational in the mid-2020s, the facility will be able to treat up to 3,000 gallons of water per minute and help the site meet regulatory limits in compliance with EPA and State of Tennessee requirements.



### DEMOLITION UNDERWAY

Demolition crews are altering Y-12's skyline in a major way with the removal of the Biology Complex. In late 2020, workers began tearing down the three-story 65,000 square foot Building 9210. With that work complete, they are moving to demolish the final structure– the six-story, 256,660-square-foot Building 9207.

The Biology Complex, which was originally comprised on 11 buildings, was vacant for many years and experienced severe deterioration. Due to its structural condition, the buildings were categorized as high-risk excess contaminated facilities. By eliminating these structures, OREM is enhancing safety and clearing 18 acres of land that can be used for national security missions.