



# Oak Ridge Site Specific Advisory Board New Member Orientation Manual

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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 is available separately.

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
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

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



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

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.

EMAB is also chartered 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.



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

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

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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.



*Board members Dennis Wilson and Belinda Price attended a tour of the Waste Isolation Pilot Plant in Carlsbad, New Mexico in 2018.*

*Oak Ridge is one of several DOE sites that ships hazardous waste from its cleanup program to WIPP for permanent, safe disposal.*

## HOW RECOMMENDATIONS ARE MADE

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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](http://energy.gov/orem/services/site-cleanup/cleanup-fact-sheets).

**East Tennessee Technology Park, formerly K-25 Gaseous Diffusion Plant (ETTP)**

The K-25 Gaseous Diffusion Plant was one of the plants in Oak Ridge that was built to enrich uranium for use in atomic 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.

Much work has already been completed. OREM's Vision 2020 calls for cleanup and reindustrialization at the site by 2020. DOE transfers appropriate pieces of remediated land back to the community for the creation of a private-sector industrial park. By the end of 2017, more than 1,000 acres had been transferred



*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. The goal is to clean up the area sufficiently so it can be turned into a private industrial park. This is how the site looked before major demolition work began.*

and an additional 800 acres were ready for the transfer process. By 2020, workers will have taken down more than 500 facilities with a footprint spanning 113 football fields. 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.

### Summary of Major Projects

- 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. .
- K-1037: Crews are currently cleaning out the 380,000-square-foot building to prepare it for demolition in early 2019. The building was once a warehouse, but it was later used to produce the material used in uranium separation and enrichment. While the building does not contain significant radiological contaminants, a large amount of legacy material and process equipment requires disposal.
- Poplar Creek Facilities: These are the most contaminated buildings remaining at ETTP. Before demolition began in this area in 2017, it was comprised of 11 large buildings and numerous structures built in the 1940s and 1950s to support the site's former nuclear program and operations. So far, EM has removed four buildings, and it expects to complete cleanup in this area in 2019.

### 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. OREM also excavated a waste burial ground and contaminated rock quarry.

### Groundwater Strategy

A number of areas at ETTP have contaminated groundwater plumes. In 2014, an ORR Groundwater Strategy report was approved, documenting efforts and recommendations by a team of DOE, EPA, and TDEC representatives. Off-site groundwater assessment is ongoing to evaluate water quality and movement.

Successful results from the study could be applied to other groundwater plumes. 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.

#### Toxic Substances Control Act Incinerator (TSCAI) Closure

The TSCAI was once the only U.S. facility permitted to incinerate certain radioactive and PCB contaminated hazardous wastes. It finished its operations in 2009 and was closed under the Resource Conservation Recovery Act (RCRA) in 2013. Demolition began in June 2018, and the projects is scheduled to be complete in fall 2018.

#### 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 on a schedule that does not interfere with 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 a portion of the inventory, while the second phase will downblend the remaining inventory to enable its disposition. OREM completed the first phase of the project in 2017, and now employees are preparing for phase two. The downblending operations will take place in nearby Building 2026. Processing operations are estimated to start 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 as they await eventual demolition. OREM has already conducted projects at Building 3028, Building 3029, Building 3026 Hot Cells, Building 7500, and the Molten Salt Reactor Experiment (MSRE), with more on the horizon if funding continues.

### 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 two storage tanks, where it solidified. A flush salt was used to clear the reactor and was drained into a third storage tank.

The tanks are located in an underground, concrete-shielded drain tank cell adjacent to the reactor cell. The reactor fuel in the salt mixtures has been removed, but the salts themselves still need to be removed and 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 future plans, which include upgrades to the electrical and ventilation systems to improve safety at the facility.



*An aerial view of the Molten Salt Reactor Experiment.*

### 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



*Two hot cells (circled) from Building 3026, remain from building demolition and require eventual disposition. The others have been removed.*

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. The two remaining hot cells have been sealed to prevent the spread of contaminants as they await demolition. The building, like many others OREM oversees at ORNL, is now in surveillance and maintenance mode.



*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, including strontium and uranium, 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 extract the groundwater for treatment. 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 will include 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 grounds. 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.

### Melton Valley Monitoring Wells

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 using an electromagnetic process. 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. Y-12 has a number of contaminated areas that need addressing.

Historically, Y-12's operations focused on a uranium enrichment method that used vast amounts of mercury. Over the years, nearly 700,000 pounds of mercury leaked from machines and pipes into the buildings and surrounding environment. These buildings need to be removed before the mercury contaminated soils can be remediated. However, ongoing efforts to capture and treat water leaving the facility have significantly reduced mercury in nearby creeks and streams.



*An aerial view of Y-12.*

Work on a new water treatment plant, the Mercury Treatment Facility, began in 2017. The plant will safeguard nearby water against any further mercury released during needed D&D of facilities at Y-12.

### Alpha 5, Beta 4 Legacy Material Disposition Projects

Alpha 5 and Beta 4 are some of the largest buildings at Y-12. Both buildings were used for uranium processing and other operations. Workers conducted significant cleanout activities that 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.

### 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.

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 plant will also safeguard against any further mercury released during D&D of facilities at Y-12 in the future. The Mercury Treatment Facility is scheduled to open in the mid-2020s.



*Artist's rendering of the Mercury Treatment Facility.*

Work has been done 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 publicly accessible portions of Lower EFPC.

### **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, they 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, stabilizing facilities, and in some cases removing the structures. OREM is currently conducting projects at the Biology Complex and Alpha-4. More projects are imminent if funding continues.



*The Biology Complex is one of Y-12's excess contaminated facilities. Characterization has been completed to identify contaminants and prepare it for demolition and disposition.*

### 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. Funding provided in the FY 2018 federal spending bill will allow OREM to address the remaining six buildings.

## Alpha-4

Alpha-4 housed equipment in the 1950s and 1960s that used large amounts of mercury for their operations. Today, this decades old equipment is rusted, deteriorating, and exposed to the elements. OREM is cleaning the equipment before it is dismantled and disposed. So far, crews have retrieved almost 5,000 pounds of mercury from the pipes and column exchange equipment (COLEX) preventing a large environmental release. Removal also eliminates a structural hazard and moves OREM closer to taking down Alpha-4.

## Bear Creek Valley



Waste management and disposal activities in Bear Creek Valley, principally associated with waste generated from the uranium processing performed at Y-12 since the early 1940s, 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.

### 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, with most of it coming from ETP. Not all waste goes to

EMWMF. Most waste that has no radioactive or hazardous components can go to one of three landfills on Chestnut Ridge, just south of Y-12. Waste with higher levels of contamination is shipped off-site to disposal areas in New Mexico, Nevada, or Utah.

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 take waste from cleanup activities until the early- to mid-2020s. Studies were done to determine where a second disposal facility could be located to accept all the CERCLA waste expected for OREM to complete the cleanup mission in Oak Ridge.

### Environmental Management Disposal Facility (EMDF)

A new facility, the EM Disposal Facility (EMDF) has been proposed by DOE and specifics are being worked out in consultation with EPA and TDEC. OREM began water and soil sampling at the preferred site, approximately one mile from EMWMF, in early 2018. A draft proposal for public comment is planned for 2018. DOE would like to open the site prior to closure of EMWMF. Construction of EMDF will allow OREM to complete its cleanup responsibilities at ORNL and Y-12.

### 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. It's estimated that about 40 million pounds of uranium are buried there. To close the site, DOE installed a concrete blanket over the burial grounds to mitigate the risk posed by the shock-sensitive materials. A small amount of uranium contamination is moving by groundwater into nearby Bear Creek from the burial grounds. 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. In 1997 DOE issued a remedial investigation and feasibility study for the site. An initial draft of a plan to remediate BCBG was developed in 2008.



## STEWARDSHIP

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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

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](http://emgis.oro.doe.gov)) and the Oak Ridge Environmental Information System ([ucor.com/oreis.html](http://ucor.com/oreis.html)).



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

## **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.

From the earlier section on EM, you'll recall that 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.

### 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.



*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*

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 800 oral history interviews have been conducted to date.

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](http://k-25virtualmuseum.org)) and the K-25 History Center, which is currently under construction and should open in 2019 with additional facilities to follow. Exhibits will include oral histories and original artifacts that 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](http://nps.gov/mapr)), which was created via an agreement between DOE and the National Park Service in 2015.



*An artist's rendering of the completed K-25 History Center and adjacent viewing tower.*

## CONCLUSION

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We hope this introduction is helpful in giving you a quick understanding of the work on the ORR. You will learn more as you attend meetings, go on tours, travel to conferences, and so on.

We encourage you to participate in the board's Facebook Page, [facebook.com/ORSSAB](https://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](https://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.

### **Deputy Designated Federal Officer (DDFO)**



*Jay Mullis*  
*OREM manager*

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 Jay Mullis, OREM manager. The 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 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.

### **ORSSAB Alternate Deputy Designated Federal Officer**

As noted above the DDFO often appoints an Alternate DDFO to work closely with the board. ORSSAB has two Alternate DDFOs. They are Melyssa Noe and Dave Adler. The Alternate DDFOs' responsibilities include:

- Assist in the management of the board and support its activities
- Provide staffing support and guidance for the board
- Ensure public notification of meetings
- Ensure board presentations are developed and provided
- Facilitate membership appointments
- Provide board budget requests and cost expenditure records
- 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
- Oversee the board's process issues



*Melyssa Noe*  
*OREM branch chief*



*Dave Adler*  
*OREM division director*

In addition to the DDFO and alternates, the board has several agency liaisons. The board has liaisons from DOE, EPA, and TDEC.

### **Agency Liaisons - DOE, EPA, TDEC**

The agency liaisons attend the board meetings but do not vote. Their responsibilities include:

- Provide agency opinions on EM issues
- Recommend board topics and prioritization
- Participate in board discussions

The current agency liaisons to the board are:  
Dave Adler, DOE; Connie Jones, EPA; and Kristof Czartoryski, TDEC.



*Connie Jones*  
EPA



*Kristof Czartoryski*  
TDEC

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## Appendix B

### **IMPORTANT DOCUMENTS AND PUBLICATIONS**

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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), but under that umbrella charter eight local (site specific) boards are organized around the country in Idaho, Kentucky, Nevada, New Mexico, Ohio, South Carolina, Tennessee, and Washington State. These local boards usually exist as long as work needs to be done. In places where work has been finished site specific boards have been disbanded.

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. 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.

#### 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/ettp\\_ffa.html](http://www.ucor.com/ettp_ffa.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 recommendations from ORSSAB.

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.

#### Final Report of the End Use Working Group

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, 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



*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.*



community volunteers finished the work 16 months later. 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.

#### Stakeholder Report on Stewardship

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.

#### 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, 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.

## Common Abbreviations Used by ORSSAB

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A	ACCAB	Anderson County Community Action Commission
	ACL	alternate concentration limit
	ADS	activity data sheet
	AEHSP	American Environmental Health Studies Project, Inc.
	AFORR	Advocates for the Oak Ridge Reservation
	ALARA	as low as reasonably achievable
	AM	Action Memorandum
	AMEM	Assistant Manager for Environmental Management
	ANS	American Nuclear Society
	ARAR	applicable or relevant and appropriate requirement
	ARRA	American Recovery and Reinvestment Act
	ATLC	Atomic Trades and Labor Council
	ATSDR	Agency for Toxic Substances and Disease Registry
B	BCV	Bear Creek Valley
	BMP	best management practices
	BYBY	Boneyard/Burnyard
C	CAB	Citizens Advisory Board (also Community Advisory Board)
	CAPCA	Closure and Post-closure Activities (Road)
	CARAR	Capacity Assurance Remedial Action Report
	CDC	Centers for Disease Control
	CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
	CH	contact-handled
	CHE	Citizens for a Healthy Environment
	CRESO	Clinch River Environmental Studies Organization
	CRESP	Consortium for Risk Evaluation with Stakeholder Participation
	CROET	Community Reuse Organization of East Tennessee
	CWA	Clean Water Act
	CWDP	Comprehensive Waste Disposition Plan
D	D&D	decontamination and decommissioning
	DARA	Disposal Area Remedial Actions [short for DARA SSF (Soils Storage Facility)]
	DFO	Designated Federal Officer
	DDFO	Deputy Designated Federal Officer
	DNFSB	Defense Nuclear Facilities Safety Board
	DOE	U.S. Department of Energy
	DOE-HQ	U.S. Department of Energy-Headquarters

	DOE-ORO	U.S. Department of Energy-Oak Ridge Office
	DP	Defense Programs
	DQO	data quality objectives
E	EA	environmental assessment
	EAC	Environmental Advisory Committee
	ECA	Energy Communities Alliance
	ECS	Environmental Council of the States
	EE/CA	engineering evaluation/cost analysis
	EEOA	Equal Employment Opportunity Agency
	EFPC	East Fork Poplar Creek
	EIS	environmental impact statement
	EM	environmental management
	EMAB	Environmental Management Advisory Board
	EMDF	Environmental Management Disposal Facility
	EMWMF	Environmental Management Waste Management Facility
	EOICP	Employees Occupational Illness Compensation Program
	EPA	Environmental Protection Agency
	EPC	Environmental Project Council
	EPCRA	Emergency Planning and Community Right to Know Act
	EQAB	Environmental Quality Advisory Board
	ER	environmental restoration
	ESD	explanation of significant difference
	ES&H	environment, safety, and health
	ETEBA	Energy, Technology, and Environmental Business Association
	ETEC	East Tennessee Economic Council
	ETEDA	East Tennessee Economic Development Agency
	ETTP	East Tennessee Technology Park (formerly the Oak Ridge K-25 Site)
	EUWG	End Use Working Group
F	FACA	Federal Advisory Committee Act
	FERC	Federal Energy Regulatory Commission
	FFA	Federal Facility Agreement
	FFCA	Federal Facility Compliance Agreement
	FFS	focused feasibility study
	FONSI	Finding of No Significant Impact
	FORNL	Friends of Oak Ridge National Laboratory
	FS	feasibility study
	FUSRAP	Formerly Utilized Sites Remedial Action Program
	FY	fiscal year

G	GAAT	Gunite and Associated Tanks
	GIS	geographical information system
H	HAZWOPER	Hazardous Waste Operations and Emergency Response
	HEUMF	Highly Enriched Uranium Materials Facility (new bldg. at Y-12)
	HRE	High-risk equipment
	HRSA	Health Resources and Services Administration
	HSWA	Hazardous and Solid Waste Amendments
I	IFDP	Integrated Facility Disposition Project
	INEEL	Idaho National Engineering and Environmental Laboratory
J	JCEJ	Joint Center for Environmental Justice
K	K-25	K-25 Building at East Tennessee Technology Park; also refers to the Oak Ridge K-25 Site (now the East Tennessee Technology Park)
L	LEFPC	Lower East Fork Poplar Creek
	LLW	low-level (radioactive) waste
	LLLW	liquid low-level (radioactive) waste
	LPSO	Lead Program Secretarial Office (of DOE)
	LTSP	Long-Term Stewardship Plan
	LUC	land use control
	LUCAP	Land Use Control Assurance Plan
	LUCIP	Land Use Planning Focus Group Land Use Control Implementation Plan
	LUPFG	Land Use Planning Focus Group
	M	M&I
M&O		management and operation (contractor)
MACT		Maximum Achievable Control Technology
MCL		maximum contaminant level
MCLG		maximum contaminant level goal
MLLW		mixed low-level (radioactive) waste
MOU		Memorandum of Understanding
MSRE		Molten Salt Reactor Experiment
MV		Melton Valley
MVST		Melton Valley Storage Tanks
N	NAAG	National Association of Attorneys General
	NABIR	Natural and Accelerated Bioremediation Research Program
	NCEDR	National Center for Environmental Decision-Making Research
	NCEH	National Center for Environmental Health
	NCP	National Oil and Hazardous Substances Contingency Plan (National Contingency Plan)
	NDAA	National Defense Authorization Act

NEPA	National Environmental Policy Act
NFI	no further investigation
NGA	National Governors Association
NHF	New Hydrofracture Facility
NIEHS	National Institute for Environmental Health Sciences
NIOSH	National Institute for Occupational Safety and Health
NNSA	National Nuclear Security Administration
NNSS	Nevada National Security Site
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRC	U.S. Nuclear Regulatory Commission
NRDA	Natural Resources Damage Assessment
NSC	(Y-12) National Security Complex
NTIS	National Technical Information System
NTS	Nevada Test Site (now known as Nevada National Security Site – NNSS)
O	
O&M	operation and maintenance
OCAW	Oil and Chemical Atomic Workers
OFCCP	Office of Federal Contract Compliance Programs
OHF	Old Hydrofracture Facility
OI	operating instruction
OLF	Oil Landfarm
OMB	Office of Management and Budget
ORFSC	Oak Ridge Financial Service Center
OPSEC	Operations Security (of DOE)
ORAU	Oak Ridge Associated Universities
ORCA	Oak Ridge Communities Allied
OREIS	Oak Ridge Environmental Information System
OREPA	Oak Ridge Environmental Peace Alliance
ORHASP	Oak Ridge Health Agreement Steering Panel
ORHPA	Oak Ridge Historic Preservation Association
ORISE	Oak Ridge Institute for Science and Education
ORNL	Oak Ridge National Laboratory
ORR	Oak Ridge Reservation
ORRHES	Oak Ridge Reservation Health Effects Subcommittee
ORSSAB	Oak Ridge Site Specific Advisory Board
OSHA	Occupational Safety and Health Administration
OSTI	Office of Scientific and Technical Information
OSWER	Office of Solid Waste and Emergency Response

	OU	operable unit
P	P&A	plugging and abandonment
	PACE	Paper, Allied-Industrial, Chemical and Energy Workers
	PAH	polycyclic aromatic hydrocarbons
	PBS	project baseline summary
	PCB	polychlorinated biphenyl
	PCCR	Phased Construction Completion Report
	PEIS	programmatic environmental impact statement
	PILT	payment in lieu of taxes
	PM	project manager
	PNNL	Pacific Northwest National Laboratory
	PP	proposed plan
	ppm	parts per million
	ppb	parts per billion
	PRG	preliminary remediation goal
	PSO	Program Secretarial Office (of DOE)
Q	QA	quality assurance
	QC	quality control
R	R&D	research and development
	RA	remedial action
	RADCON	radiation control
	RAP	remedial action program
	RAR	remedial action report
	RAWP	remedial action work plan
	RCERB	Roane County Environmental Review Board
	RCRA	Resource Conservation and Recovery Act
	RD	remedial design
	RDR	remedial design report
	RDWP	remedial design work plan
	RER	remediation effectiveness report
	RFA	RCRA facility investigation
	RH	remote-handled
	RI	remedial investigation
	RI/FS	remedial investigation/feasibility study
	RIWP	remedial investigation work plan
	RmAR	removal action report
	RmAWP	removal action work plan
	ROD	Record of Decision

S	S&M	surveillance and maintenance
	SAP	sampling and analysis plan
	SARA	Superfund Amendments and Reauthorization Act
	SCEJC	Scarboro Community Environmental Justice Council
	SDWA	Safe Drinking Water Act
	SEAB	Secretary of Energy Advisory Board
	SEDIMIS	Sentinel Environmental Disease and Injury Management Information System
	SIOU	Surface Impoundments Operable Unit
	SMART	Stewardship Management Archival/Retrieval Tool
	SOCM	Save Our Cumberland Mountains
	SOP	standard operating protocols
	SOT	Society of Toxicology
	SSAB	Site Specific Advisory Board
	STGWG	State and Tribal Government Working Group
	SWG	Stewardship Working Group
	SWMU	solid waste management unit
	SWSA	solid waste storage area
T	TAG	technical assistance grant
	TCE	trichloroethylene
	TDEC	Tennessee Department of Environment and Conservation
	TDH	Tennessee Department of Health
	TEC/WG	Transportation External Coordination Working Group
	TEMA	Tennessee Emergency Management Agency
	TPMS	Tennessee Parcel Mapping System
	TRI GIS	Toxic Release Inventory Geographic Information Survey
	TRU	transuranic
	TSAB	Traffic Safety Advisory Board
	TSCA	Toxic Substances Control Act
	TSCAI	Toxic Substances Control Act Incinerator
	TSCATS	Toxic Substances Control Act Test Submission
	TSWMA	Tennessee Solid Waste Management Act
	TVA	Tennessee Valley Authority
U	UEFPC	Upper East Fork Poplar Creek
	UF <sub>6</sub>	uranium hexafluoride
	UMTRA	Uranium Mill Tailings Remedial Action
	USEC	U.S. Enrichment Corporation (contractor at PORTS & PAD)
	USQ	unreviewed safety question
	UST	underground storage tank

V	VOC	volatile organic compound
W	WAG	waste area grouping
	WATTEC	Welding and Testing Technology Exhibition Conference
	WBS	work breakdown structure
	WGF	waste generation forecast
	WHP	waste handling plan
	WIPP	Waste Isolation Pilot Plant
	WM	waste management
	WRRP	Water Resources Restoration Program
	WTS	water treatment system
X	X-10	Oak Ridge National Laboratory
Y	Y-12	Y-12 National Security Complex
Z		





# 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. 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 year beginning on the day they were elected.
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.
7. 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.
8. The Chair serves between regular meetings of the Board as contact for EM, interest groups, and the general public.
9. The Vice Chair serves as Chair in the absence or incapacity of the Chair.
10. 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.
11. The Chair, Vice Chair, and Secretary will have other duties as assigned by the Board.
12. 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.
13. 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. Each committee so established will submit before October 1<sup>st</sup> an annual work plan for approval by the Board and DOE.

**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 Board Finance & Process 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<sup>th</sup> 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, 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**

**A. Authority:** The Board will provide a proposal to the DDFO. 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.

**B. Compensation:** Board members will serve without compensation but may receive reimbursement for direct expenses related to the work of the Board and meeting attendance.

**C. 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**

The Chair shall appoint a committee of members to conduct an annual evaluation to assess how adequately it is representing stakeholder interests and meeting the needs of the public. The Board may also evaluate the responsiveness of EM. After Board approval, but no later than December 31<sup>st</sup>, the report will be submitted to EM.

## **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 employee 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:

- 1) 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;
- 2) The gift is motivated by a family relationship or personal friendship rather than a member's position; and
- 3) 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**

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.

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: February 11, 2015*

**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 statutes.
- 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.

#### Office of the Assistant General Counsel for General Law

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.

#### Office of the Assistant Secretary for Environmental Management (EM-1)

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).

#### Office of Intergovernmental and Community Activities

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.

#### EM Program Offices (as appropriate)

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, will

- 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.**

### Public Notification

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.

### Minutes and Records

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.

#### Annual Comprehensive Review to Headquarters

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.

#### Member Appointment and Reappointment

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.

#### Delegated Authority to the Field for Member Appointments

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](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>

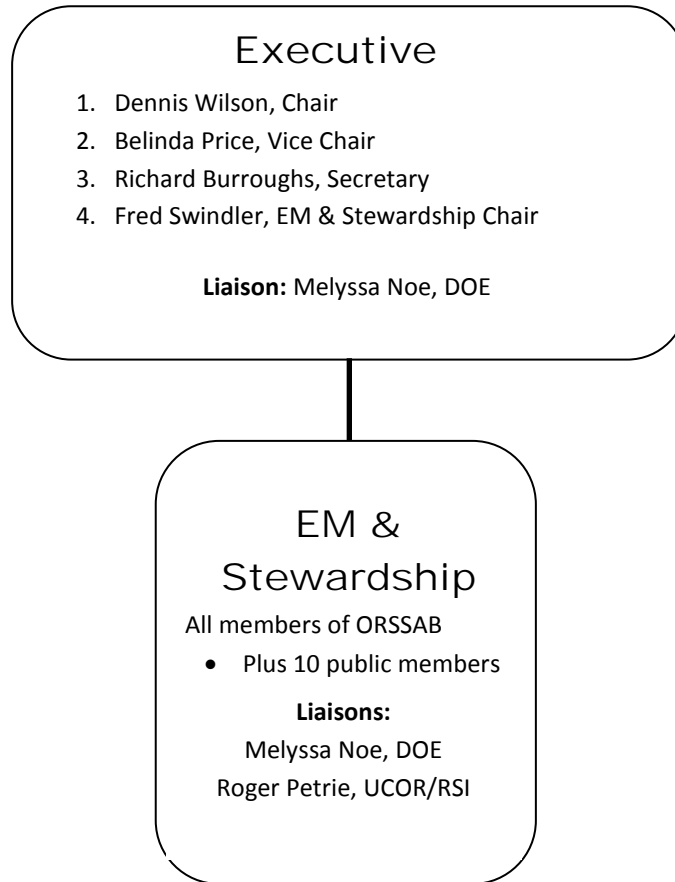
Charter: Office of Environmental Management, Office of Intergovernmental and Community Activities, U.S. Department of Energy Amended Charter: Environmental Management Site-Specific Advisory Board (2012).

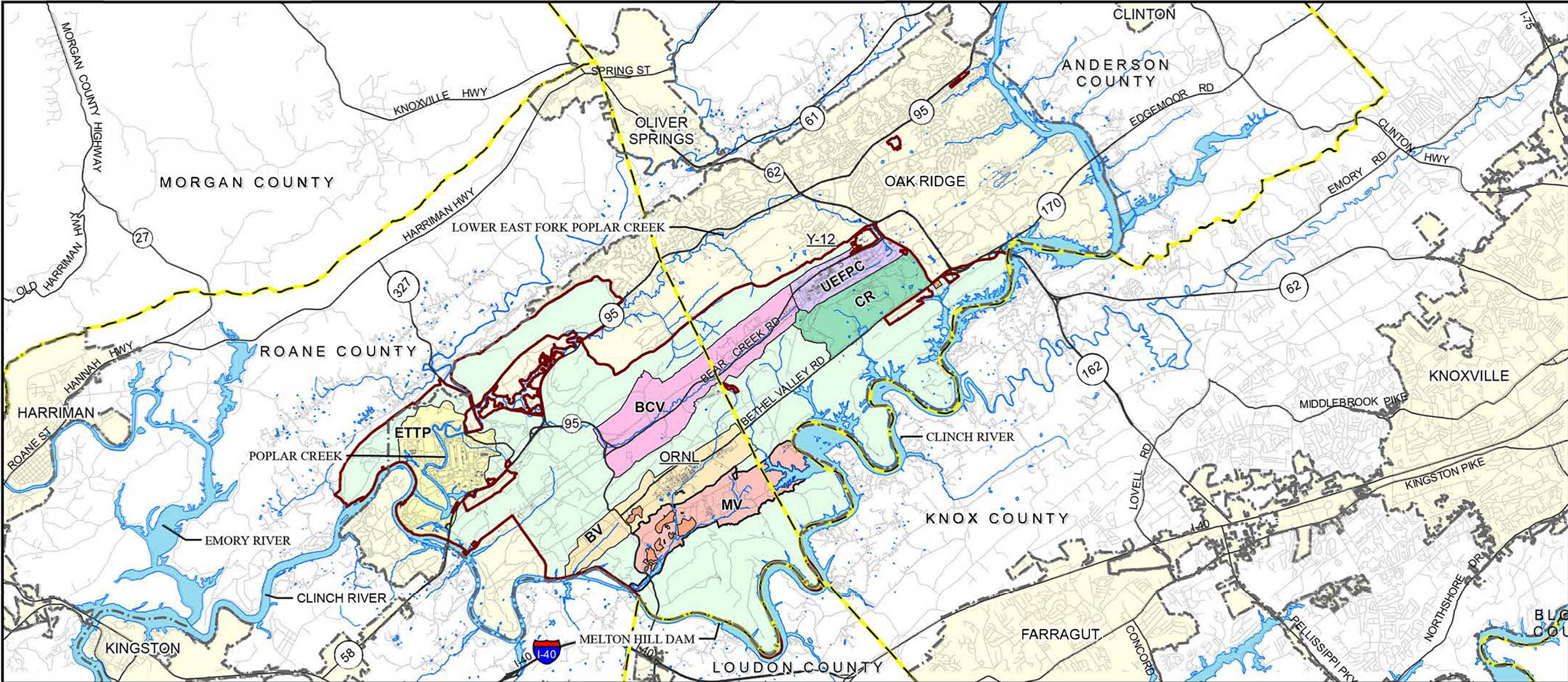
<http://energy.gov/sites/prod/files/em/EMSSABCharter-FINAL.pdf>

Delegations:

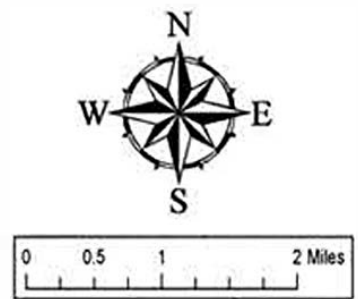
- Department of Energy Delegation Order No. 00-002.00B to the Under Secretary for Energy, Science, and Environment (October 4, 2004).
- <https://www.directives.doe.gov/sdoa/delegations-documents/002.00B/view>
- Department of Energy Re-delegation Order No. 00-002.03B to the Assistant Secretary for Environmental Management (January 29, 2007).
- <https://www.directives.doe.gov/sdoa/delegations-documents/002.03B/view>

# FY 2018 ORSSAB Committees





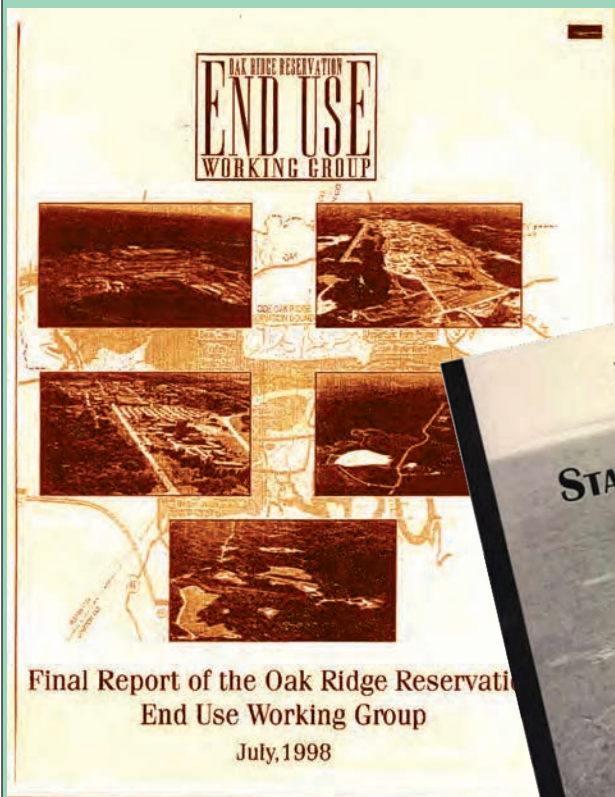
- ROAD
- CITY LIMITS
- COUNTY BOUNDARIES
- OAK RIDGE RESERVATION
- BUILDING
- CHESTNUT RIDGE
- AFFECTED AREAS CERCLA
- SURFACE WATER



- ADMINISTRATIVE WATERSHEDS
- BEAR CREEK VALLEY
  - BETHEL VALLEY
  - EAST TENNESSEE TECHNOLOGY PARK
  - MELTON VALLEY
  - UPPER EAST FORK POPLAR CREEK



# 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**

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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.

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.



Map of ETTP showing Zones 1 and 2.

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<sub>6</sub> (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<sub>6</sub> cylinders have been removed from the site).

## **STEWARDSHIP**

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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, trichloroethene, trichloroethane, volatile organic compounds, polychlorinated biphenyls, and others. Half-lives of radioactive elements range from 12 years to basically forever.

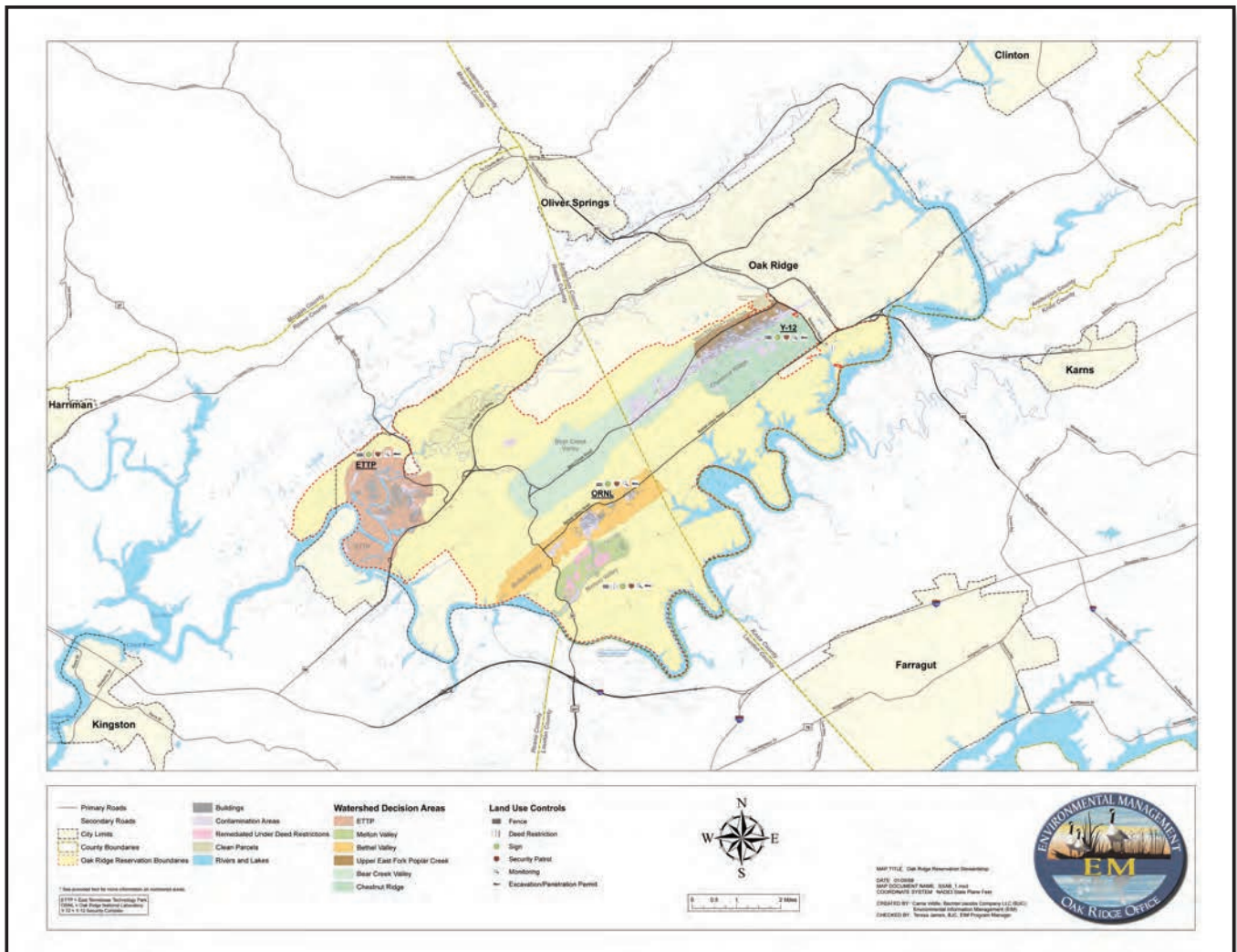
Abundant rainfall in the area and high water tables contribute to leaching of contaminants from waste areas into surrounding soil, surface water, and groundwater. Migration of contaminants in groundwater is especially difficult to track.

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.



# 2017 Annual Report

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

# Message from the Chair

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Dennis Wilson

It is my pleasure as chair of the Oak Ridge Site Specific Advisory Board to present the board's 2017 Annual Report.

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

In 2017 the board built upon the momentum of the accomplishments of our previous year. With strong leadership from the Environmental Management and Stewardship Committee, it developed and submitted four recommendations to DOE. You'll find summaries of these key topics starting **on page 10**. They focused on protecting groundwater resources; the Biology Complex at Y-12 National Security Complex; the proposed EM Disposal Facility; and budget priorities for cleanup operations.

Board members participated in both of the semiannual SSAB chairs meetings: in the spring in Paducah, Ky. and the fall in Hanford, Wa. Part of the work product from these meetings was the two chair's recommendations dealing with DOE communications and operation of the reopened Waste Isolation Pilot Plan, which you'll find **on page 14**. Further, a primer on "Effective Recommendations" was produced and brought back to the ORSSAB as a key learning tool. The board also took part in the DOE EM Community Workshop; became a consulting party on the historic preservation activities at East Tennessee Technology Park; and celebrated the groundbreaking of the Outfall 200 Mercury Treatment Facility—a key step in the transition to environmental clean-up at Y-12.

The board experienced the retirement of several senior board members this last year. Some of them continue to contribute through their active participation in the EM and Stewardship Committee. They help to guide newer members through the in-depth discussions and editing of recommendation drafts. The advancements made to the board's review process by previous leadership will continue to guide the timely review of the priorities of DOE's environmental management mission. The contribution of this year's new board members will be enhanced due to the process refinements as the board tackles DOE's 2018 priorities:

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

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

Join us!

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

Dennis Wilson

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# Our Mission

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

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

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

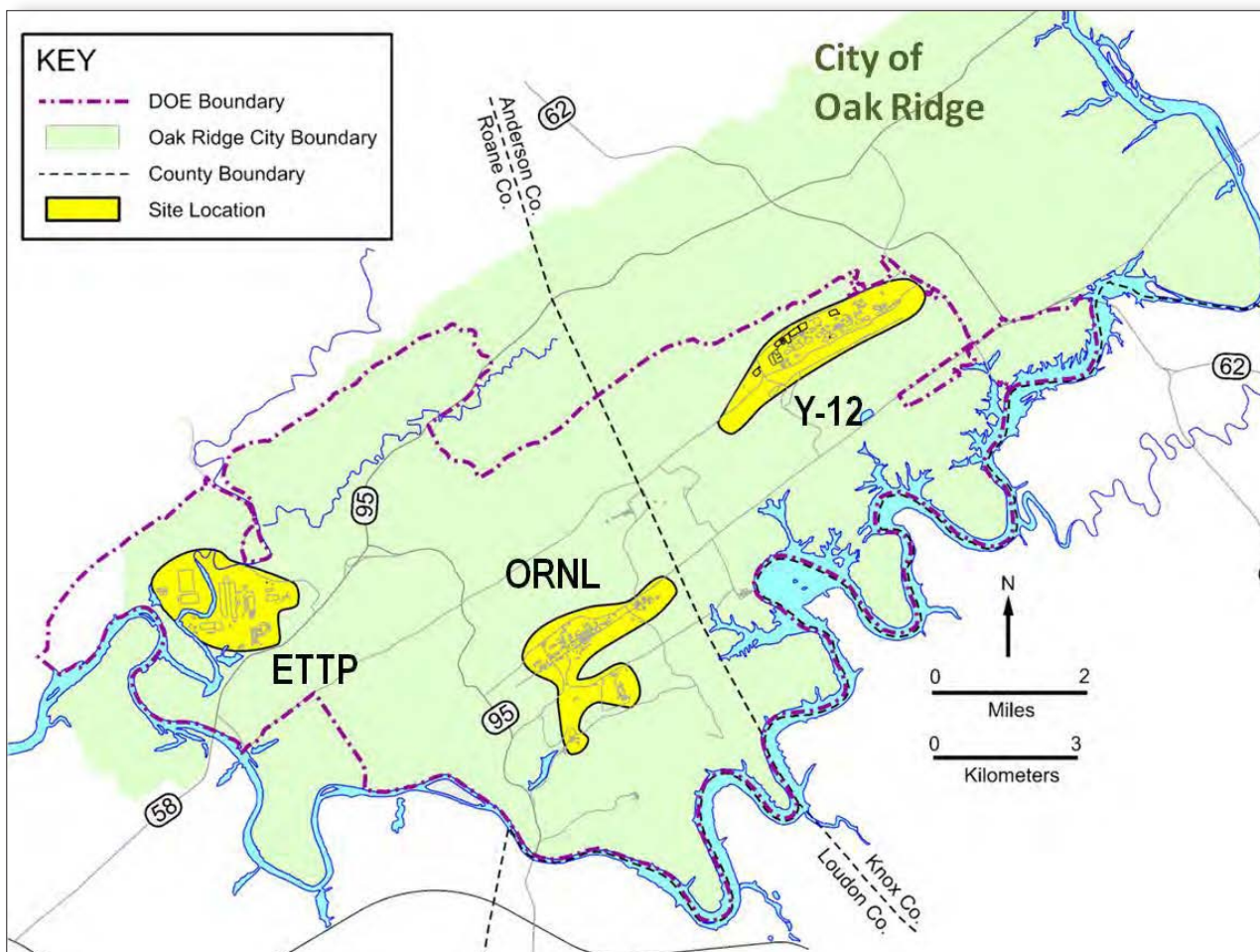
The board is committed to reflecting the concerns of the communities impacted by EM activities on the Oak Ridge

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

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

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

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



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

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

At the close of 2017, the board consisted of 20 voting members from Anderson, Knox, Loudon, and Roane counties. More about them can be found in the “Members” section starting on Page 21.

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

### FY 2017 Board Officers

ORSSAB officers for the year were Belinda Price, chair; Dennis Wilson, vice chair; and Dave Hemelright, secretary. Ed Trujillo was chair of the EM & Stewardship Committee.

### Board Meetings

The board meets most months to hear presentations by EM personnel working on relevant projects, listen to and discuss input from concerned citizens, consider recommendations

to DOE, and conduct other business. In August, an annual meeting is held to evaluate the board’s work during the year and plan activities for the next year.

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

### Committees

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

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

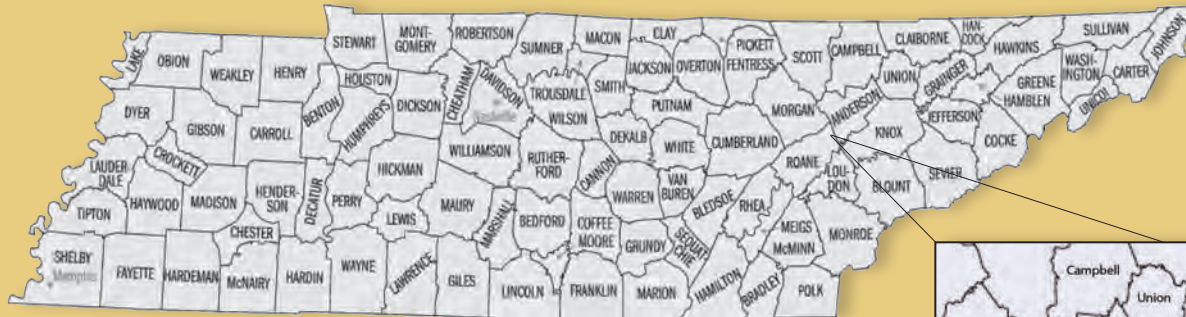
Committees usually meet monthly, and all meetings are open to the public.



The 2017 Oak Ridge Site Specific Advisory Board



# REPRESENTING NINE COUNTIES IN EAST TENNESSEE



## Board members from each county at the close of 2017:

Anderson - 7  
Knox - 8

Loudon - 2  
Roane - 3

## Join the Board

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

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

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

## Abbreviations

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

# The Year's Top News



*A shipment of waste leaves Oak Ridge for permanent disposal at WIPP near Carlsbad, N.M.*

## Heading West

In 2017, the Waste Isolation Pilot Plant (WIPP) resumed accepting waste for the first time since 2014. This summer, Oak Ridge was able to send its first shipment of treated transuranic waste to the facility since 2012. In the interim, waste processed by the Transuranic Waste Processing Center (TWPC) had to be stored in Oak Ridge, which was not ideal. As of early December, 13 contact handled waste shipments had been transported for permanent disposal.

OREM also completed its Uranium-233 (U-233) Direct Disposition Campaign, which removed half of the legacy waste materials containing U-233 that were stored at Oak Ridge National Laboratory (ORNL).

*Employees at Oak Ridge's Transuranic Waste Processing Center celebrate the site's first shipment to WIPP since 2012.*





*GEM Tech President Michael Evans, UCOR President Ken Rueter, U.S. Rep. Chuck Fleischmann, Deputy Energy Secretary Dan Brouillette, U.S. Sen. Lamar Alexander, Tennessee Deputy Governor Jim Henry, OREM Manager Jay Mullis, and Principal Deputy Assistant Secretary for Environmental Management Jim Owendoff break ground on the new Mercury Treatment Facility.*

## Preparing for the Next Big Cleanup

Breaking ground on the new Mercury Treatment Facility was a major step toward transitioning OREM's cleanup mission from East Tennessee Technology Park (ETTP) to Y-12 National Security Complex (Y-12). Having the facility in place before demolition and cleanup of Y-12 buildings begins will minimize the amounts of mercury released due to those operations.

The facility is expected to reduce mercury in water leaving Y-12 through Upper East Fork Poplar Creek by about 84 percent. When operational, the facility will be able to treat 3,000 gallons of water per minute and include a storage tank capable of collecting two million gallons of stormwater.

The facility will aid in meeting regulatory limits set by EPA and the State of Tennessee and provide critical infrastructure needed to achieve DOE's next long-term goal: Vision 2024, which entails complete cleanup of Y-12 by that date.

## January

### DOE Plans to Form an EM National Lab Network

Then-EM Acting Assistant Secretary Sue Cange charged Savannah River National Laboratory, EM's corporate lab, with establishing and leading a new EM National Laboratory Network. It will be chaired by the Savannah lab director and co-chaired by the director of the Pacific Northwest National Laboratory at the Hanford Site. The Oak Ridge, Los Alamos and Idaho national labs are also part of the network.

Creation of the network is the result of recommendations from the Commission to Review the Effectiveness of the National Energy Laboratories to make the best use of the labs' know-how in environmental cleanup.

## February

### DOE Completes Demolition of K-731 at ETTP



*Building K-731 during demolition.*

DOE and its cleanup contractor UCOR completed the demolition of the K-731 Building at ETTP. Built in 1944, Building K-731 powered the K-27 and K-29 process buildings. The facility contained three floors measuring 31,350 square feet each, including two above-ground floors and a basement.

The work marked a step toward DOE's Vision 2020 to complete cleanup of ETTP and continue transforming the site into a private industrial park.

## March

### ETTP Airport Layout Plan Moves Forward

The General Aviation Committee of the Metropolitan Knoxville Airport Authority recommended that an Airport Layout Plan for a general aviation airport in Oak Ridge be submitted to the Federal Aviation Administration. The plan for the airport, proposed to be built along Tennessee Highway 58 fronting ETTP, includes a 5,000-foot runway, a parallel taxiway, and about 40 hangars.

Pending approvals construction could begin in late 2018 or early 2019. Estimated cost for the airport is \$35 million to \$40 million with funding from several government agencies.

### OREM Project Director, Team Receive Awards

Energy Secretary Rick Perry (right) presents Wendy Cain with DOE's Federal Project Director of the Year award for 2016.



Energy Secretary Rick Perry honored OREM's Wendy Cain as Federal Project Director of the Year for 2016. Cain, who oversees the cleanup portfolio at ETTP, earned the award by demonstrating exceptional leadership and project management acumen while overseeing the demolition of a former uranium enrichment facility.

Under her leadership, OREM completed the \$40 million K-31 demolition project ahead of schedule and about \$4 million under budget. Perry also presented the Oak Ridge K-31 Facility Demolition Team with the Department's Achievement Award.

## April

### EM Advisory Board Meets in Oak Ridge



*The EM Advisory Board met in Oak Ridge this spring.*

DOE's Environmental Management Advisory Board met in Oak Ridge in April. It is similar to the SSABs, but it provides independent advice and recommendations directly to the Assistant Secretary for EM.

Like the SSABs, it is chartered under the Federal Advisory Committee Act, but its membership includes individuals from governmental and non-governmental entities, private industry, and scientific and academic communities.

The two-day meeting included a tour of the ORR and a public meeting at the DOE Information Center that featured an update on EM activities nationwide provided by Sue Cange, then acting assistant secretary for EM. The board also received information about the cleanup of Y-12 and ORNL, specifically related to the DOE's Excess Contaminated Facilities initiative.

## OREM Holds Public Workshop on Budget



ORSSAB members attended the annual budget workshop.

Each spring OREM holds a public workshop on the budget development process and priorities for Oak Ridge cleanup that go into the local budget request to DOE EM headquarters in Washington, D.C..

Alan Stokes, OREM associate director for planning and execution, explained the federal budget development process and ultimate appropriations for federal programs and the local cleanup budget. Jay Mullis, OREM acting manager, laid out Oak Ridge's near and long term priorities and how appropriations are made for various projects.

ORSSAB used the information provided to develop a recommendation on OREM's budget request to EM headquarters, which is summarized on page 13.

## WIPP Gets First Shipment Since 2014 Closure

The WIPP facility in New Mexico received its first shipment of TRU waste since the facility was shut down in February 2014. A truck fire and unrelated radiological event caused the closure. The shipment from Idaho was an important milestone for WIPP and DOE sites like Oak Ridge that had to store TRU waste while the facility was closed.

## DOE Completes Soil Remediation Project

OREM and its primary cleanup contractor UCOR completed the remediation and final closure of a former pond known as Exposure Unit 29 at ETTP.

Workers removed a layer of clean topsoil and the low level contaminated soil it was protecting. All of the soil, more than 10,000 cubic yards, was disposed at the Environmental Management Waste Management Facility (EMWMF).

Completion of the project moved OREM a step closer to completing cleanup of ETTP by 2020.

## May

### Site Cleanup Removes Potential Mercury Threat

Workers inspecting and cleaning the pipes and column exchange equipment on the west side of Alpha 4 at Y-12 have tapped and drained more than 2,100 feet of the 5,700 feet of piping at the site.

The project prevents mercury releases and risks stemming from rusted, structurally degraded equipment, clearing the way for Alpha 4's eventual demolition, a major cleanup goal at Y-12. Workers have retrieved 1,000 pounds of mercury.

### Energy Secretary Visits Y-12, ORNL



Jay Mullis, front center, then-acting manager of OREM, talks about federal site cleanup work in Oak Ridge during a visit by Energy Secretary Rick Perry, left.

Secretary of Energy Rick Perry in May visited ORNL and Y-12 for the first time during his tenure. During his visit, Perry pledged to be a "strong advocate" for DOE.

"...What DOE is involved with, particularly on the economic development side, plays a vital role not only in the security of America, but in the economic well-being of this country," he said.

## Analysis Paves Way for Biology Complex Removal



A technician surveys a pipe inside one of the buildings in the Biology Complex for contamination.

UCOR, OREM's primary cleanup contractor, finished characterizing the Biology Complex at Y-12 in May, identifying contaminants before proceeding with planned demolition and waste disposition.

"Our goal is to eventually take down this 1940s-era complex, which will eliminate safety risks and provide land for Y-12 to continue its important national security missions," said Jay Mullis, then-OREM acting manager.

## Members Travel for Spring Chairs Meeting



The Spring Chairs Meeting brought together SSAB representatives from across the DOE complex.

The Paducah, Ky. SSAB hosted the Spring Chairs Meeting in May. Oak Ridge attendees included ORSSAB Chair Belinda Price, Vice Chair Dennis Wilson, and Secretary Dave Hemelright, as well as Ben Williams, public affairs specialist for OREM.

Two recommendations were approved by the group during the meeting: "Above Ground Storage at the Waste Isolation Pilot Plant (WIPP)" and "Cleanup Performance Road Map and Communication Strategy" are summarized on Page 14.

## June

### DOE Awards \$49M Contract for OREM Work

DOE awarded Pro2Serve a contract to provide continued technical support services to OREM. The five-year contract has a maximum value of \$49 million.

Pro2Serve is responsible for reviewing and evaluating the cost, schedule, and technical approach for cleanup projects.

### DOE Appoints Owendoff to EM-1 Position

James Owendoff was named principal deputy assistant secretary in the Office of Environmental Management. He will also serve as the acting assistant secretary for EM until a presidential nominee is submitted and confirmed.



James Owendoff

As one of his first actions, Owendoff initiated a program review to identify opportunities to improve the waste cleanup program.

### Oak Ridge Firms Receive Awards from DOE

Two Oak Ridge companies involved in federal cleanup work received small business awards from DOE. Restoration Services Inc. was named the Small Business of the Year during the 16th Annual DOE Small Business Forum and Expo in Kansas City, Mo. Scientific Sales Inc. was named the 8(a)/Small Disadvantaged Business of the Year.

## July

### K-732 Switchyard Cleanup Complete



CTI workers clean up the K-732 switchyard

OREM and cleanup contractor CTI & Associates completed demolition of the K-732 switchyard, which was built in 1944 to support the Manhattan Project. The five-acre site will be transferred from government ownership as part of the planned ETTP industrial park.

## Demolition of Poplar Creek Facilities Underway



Workers tear down the K-832 Cooling Water Pumphouse.

Crews in July demolished two of the 11 buildings and related structures that make up the Poplar Creek facilities: the K-832-H Cooling Tower and the K-832 Cooling Water Pumphouse. Both supported uranium enrichment work.

The buildings are some of the most contaminated remaining at the site, according to DOE, and are a significant milestone in the transformation of ETTP.

### August

#### OR Sends First TRU Waste Shipment Since 2014

Oak Ridge's TWPC in August made its first shipment to WIPP in New Mexico since a string of accidents shut down the facility in 2014.

OREM expects to make multiple shipments per month to reduce its stored waste inventory.

### September

#### Cleanup Contractor Recognized for Safety Efforts

UCOR, OREM's cleanup contractor, has received a 2017 Industry Leader Award for safety performance from the National Safety Council. It's the latest in a string of accolades for the company this year, including the VPP Innovation Award and the Safety and Health Outreach Award from the Voluntary Protection Program Participants' Association, and an Innovation Award in Environmental Health & Safety from Verdantix.

### October

#### DOE Shares Plans for K-25 History Center

During the city of Oak Ridge's 75th anniversary events, DOE representatives showed a preview of the K-25 History Center at ETTP. The center's exhibits will include oral histories and original artifacts that commemorate the work of K-25 and provide historical context.

## Transfers Include Some of Biggest Parcels to Date

Land previously home to the K-31 and K-33 sites at ETTP is now in the hands of the Community Reuse Organization of East Tennessee. The parcel totals nearly 200 acres and represent the largest single piece of land at the site.

Nearby, the transfers of Duct Island and the Powerhouse Area are underway, which will open another 200 acres.

### November

#### Mullis Named OREM Cleanup Manager

DOE this month named Jay Mullis the manager of OREM. He had served as OREM acting manager since 2016 and deputy manager since 2015.

Mullis said his top priority is to make sure the cleanup program maintains its momentum. That means pushing forward to complete cleanup at ETTP on schedule, preparing for new work at Y-12 and ORNL, and continuing to focus on eliminating Oak Ridge's waste inventory.

#### Contractor Removes U-233 Waste from ORNL

After two years of effort by Isotek Systems workers, half of legacy waste materials containing U-233 have been removed from Building 3019 at ORNL.

The remaining waste will undergo processing in nearby Building 2026, which OREM recently acquired from the DOE Office of Science. The building will be modified for this purpose and operations should start in 2019.

#### DOE Assessment Prioritizes Five OREM Projects

Five Oak Ridge EM cleanup projects were highlighted as part of a complex-wide analysis by DOE headquarters that was designed to identify high-priority projects with an accelerated return on investment potential.

Projects include establishing a path forward for non-radiologically contaminated elemental mercury; pursuing benefits of in-cell macro encapsulation; an evaluation of long-term in-place stabilization of waste in the Molten Salt Reactor; accelerated retrieval of medical isotopes from U-233 wastes; and implementation of remote-handled waste overpacks to enable disposal of ORNL TRU waste at WIPP.

### December

#### Agencies Agree to Move Forward on EMDF

DOE, EPA, and TDEC this month reached agreement on some disputed provisions of plans for a new waste disposal facility for OREM. The parties are working together to draft an approved proposed plan to present to the public for comment.

OREM's preferred alternative is a site in Central Bear Creek Valley and it is planning for characterization efforts there as well as building temporary access roads.

# Key Issues

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

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

## Recommendations on the Proposed Environmental Management Disposal Facility for Oak Ridge

Wastes from OREM cleanup activities are largely disposed in the Environmental Management Waste Management Facility (EMWMF) – a dedicated disposal facility in Bear Creek Valley operating since 2002. The site will be full by approximately 2023. DOE estimates that it will need additional space for approximately 2.5 million cubic yards of waste through the year 2046.

DOE first announced that additional CERCLA waste disposal capacity on the ORR would be necessary in December 2010 due to the expansion of OREM's scope in the years since construction of EMWMF. Need for additional capacity is primarily due to: (1) the availability of American Recovery and Reinvestment Act funds that allowed OREM to accelerate clean-up projects, and (2) expansion of the OREM program in recent years to include removal of outdated facilities at ORNL and Y-12.

ORSSAB began discussing the need for additional CERCLA waste disposal capacity on the ORR at its December 2010 EM & Stewardship Committee meeting and has continued to follow developments. It issued previous recommendations to DOE on EMDF in 2011 and in 2014.

DOE has since proposed a new disposal area, named the Environmental Management Disposal Facility (EMDF). In May 2016, DOE provided ORSSAB with an update on planning for CERCLA waste disposal capacity at its monthly meetings. The following recommendations were generated from those discussions.

### Recommendations

ORSSAB supports onsite disposal of Oak Ridge EM CERCLA wastes that meet the onsite waste acceptance criteria. In addition to its prior recommendations, ORSSAB wishes to include the following:

- Continue with planning for additional on-site disposal capacity for low-level radioactive and chemically hazardous contaminated waste.
- Continue efforts to minimize the need for additional on-site capacity by using lessons learned and operational and disposal efficiencies from operation of

EMWMF. This should consider all volume reduction possibilities.

- Consider using contaminated soils authorized for disposal at the EMDF as fill instead of clean fill, which decreases disposal capacity for contaminated materials.
- Consider methods for expanding EMWMF capacity as a way to assure the smallest possible footprint for the new disposal facility.
- Ensure that the proposed disposal facility will have sufficient capacity to accept all appropriate future generated waste from DOE activities through cleanup of the ORR.
- Ensure that the proposed facility is engineered to operate safely and that migration of contaminants into adjacent groundwater, soil, and air does not exceed environmental regulatory limits.
- Locate the facility in proximity to existing waste burial grounds, if technically feasible, such that contaminated areas are consolidated on the ORR. Sites in Zone 2 and 3 at Y-12 are acceptable as options because they fit this criteria and are favorable in terms of transporting waste. The board does not support greenfield intrusion (e.g., Zone 1).
- Ensure that a trust fund for long-term stewardship is established for any future disposal facility similar to that for EMWMF.



Several onsite disposal location options for EMDF were considered.



## Recommendations on Biology Complex Facilities at Y-12 National Security Complex

Following a 2015 audit by the Government Accountability Office, DOE's excess contaminated facilities came under increased scrutiny. Deteriorating structures pose risks to workers and the environment, and carry high maintenance costs. There are approximately 350 excess contaminated facilities located in Oak Ridge and half of those are classified as high risk.

Increased attention from the audit contributed to funding "plusups" in FY16. OREM received \$28 million and has used those funds to help stabilize structures for long-term stewardship until decontamination and decommissioning.

At the November 9, 2016 ORSSAB meeting, DOE federal portfolio project directors provided a presentation on excess contaminated facilities at Y-12 and ORNL. The presentation gave an overview of risk-reduction and stabilization activities made possible with the extra funding for excess contaminated facilities.

Board members participated in a tour of some of the excess facilities, including the Biology Complex at Y-12, and took part in detailed discussions with DOE personnel at the EM & Stewardship Committee meeting later that month.

Based on the information regarding the Biology Complex provided during these interactions, the following issues were reviewed:

- Upfront activities at the complex should continue to be planned and implemented in a limited scope.
- Those activities might include additional tasks, such as planning for removal of equipment and items that are

- not grossly contaminated and developing a plan for safe and effective access and egress within the complex.
- Since the timing for deactivation & decommissioning of excess facilities is out to FY 2025 and beyond, concentrating particular effort on the Biology Complex would prove to the community that these facilities are also consequential.

### Recommendations

The disposition of excess facilities is important to ORSSAB, as these facilities represent a continuing risk to the environment and the health and safety of workers and the community.

ORSSAB provided the following recommendations:

- Continue to work on upfront activities at the Biology Complex with the addition of others such as the decontamination, if required, removal, and disposal of non-contaminated and minimally contaminated interior equipment.
- Develop a personnel access plan for the various sections of the complex, with the purpose of moving items within the complex to establish safe pathways, strengthen structural sections/members to avoid potentially catastrophic conditions. ORSSAB recommends having this plan ready prior to initiating actual D&D activities within the complex.
- Redirect additional funding plus-ups for the proposed upfront activities at the complex and the recommendations delineated above.



**Above:** An aerial view of the Biology Complex identifies several of its facilities.

**Top right:** External disrepair includes tiles fallen from the façade of Building 9211. **Bottom right:** A Crew prepare samples from inside complex for shipment to the laboratory for analysis.



## Recommendations on Groundwater Investigations on the ORR

As a result of past research and industrial activities on the ORR, groundwater beneath several areas of the reservation has become contaminated. Groundwater investigations have been done on and adjacent to the ORR since the 1980s, but a dedicated effort began in 2013 to sample numerous offsite locations and identify near-term onsite groundwater remediation projects.

OREM, TDEC, and EPA formed a Groundwater Strategy Team, which held a series of workshops to develop a groundwater strategy (document DOE/OR/01-2628) to guide the path forward for groundwater remediation on the ORR. Those objectives include:

- Identify and address potential threats to offsite public health from exposure to groundwater contaminated by ORR sources.
- Pursue selected remedial actions as necessary to prevent unacceptable risk and groundwater degradation and to restore groundwater to beneficial use where practicable.
- Achieve final ORR cleanup, including final groundwater decisions.

The strategy team discussed all of the known contaminated groundwater plumes located on the ORR and placed them in a hazard ranking system based on the size of the plumes, contaminant concentrations, whether a plume was moving, and risk of migration off the reservation. The team identified potential projects to address 35 plumes.

ORSSAB has been interested in the status of groundwater on and around the ORR for a number of years; during that time DOE and contractor experts have provided several

presentations on groundwater conditions and possible consequences of contaminated groundwater migrating offsite. With information gathered from presentations, the strategy document, and groundwater tours ORSSAB developed the following recommendations.

### Recommendations

- Diligent and continued efforts to monitor for and address potential offsite migration in areas such as Melton Valley and White Oak Creek if needed.
- Additional surveillance monitoring to establish a monitoring framework in Bethel Valley and annual reports of results.
- Continued prioritization based on risk and creation of a five-year review of the groundwater strategy to revisit the ranking of plumes and to adjust priorities and budgets as needed.
- Site specific modeling in the Melton Valley area to include installation of additional monitoring wells (if needed) and the implementation of treatability and/or pilot-scale options as funding allows.
- Fully fund and schedule preliminary planning, study, and technology demonstrations so that full-scale final cleanup efforts can begin no later than 2025. In order to achieve this, the board recommends considering refocusing available money from plus-ups, surpluses, etc., toward the groundwater effort. The board requests that DOE provide updates to the board as strategies are developed to allow for comment.
- Maintain communications with offsite groundwater users, especially in Melton Valley and Bethel Valley, as necessary to remain cognizant of planned usage that may pose an unacceptable risk.



Employees collect samples to record mercury levels in the East Fork Poplar Creek ecosystem.

## Recommendations on FY19 Oak Ridge EM Program Budget Priorities

In April, the Oak Ridge EM program held its annual Community Budget Workshop to discuss the FY 2019 budget formulation as part of the larger process by headquarters to submit a final budget request to the president. Annual budget requests are normally developed two years in advance.



Board members attend the April 2017 Community Budget Workshop.

ORSSAB focused on general cleanup priorities identified at the Community Budget Workshop to create its recommendations for the FY 2019 Oak Ridge EM budget. These priorities are associated with general program “visions,” including one that is finished: Vision 2016, Vision 2020, and Vision 2024.

Project-specific objectives spelled out in the Community Budget Workshop provided additional details for discussions by the board’s EM & Stewardship Committee.

### Recommendations

From its study, ORSSAB identified five priorities for ORR cleanup. It recommended full funding for these projects and suggested they be prioritized for any future excess funds.

#### Offsite Groundwater Monitoring

- Assessment of offsite groundwater quality and public health impacts
- Evaluation of potential offsite plume migration pathways
- Continued monitoring of offsite groundwater

#### Future Waste Disposal Capacity

- Plan for sufficient capacity at a proposed new onsite disposal facility
- Maintain a trust fund for long-term stewardship of future onsite disposal facilities

#### Excess Facilities Disposition

- Continue planning and implementing of upfront activities
- Removal/decontamination of equipment not grossly contaminated
- Developing an access plan to establish safe means for access and egress from facilities under consideration

#### Mercury in East Fork Poplar Creek

- Continue technology development to support the Mercury Cleanup Strategy
- Continue mitigation of mercury methylation in East Fork Poplar Creek

#### Residual Debris at ETTP.

- Plan and implement cleanup of remaining debris and unwanted items at ETTP for uncomplicated transfers to potential tenants

OFFICE OF ENVIRONMENTAL MANAGEMENT

OREM has a clearly defined plan for successfully completing cleanup

**Vision 2016**  
Completion of GDP building demolition at ETTP

**Vision 2020**  
Remaining portion of ETTP cleaned up and reindustrialized

**Vision 2024**  
Expand cleanup work to Y-12 to address mercury contamination

K-27 Demolition Completed

K-31/K-33 Area Ready for Reuse

Alpha 4 Awaits Cleanup and Demo

An OREM presentation slide outlines current and future cleanup priorities. Vision 2016 was accomplished when the last of the Gaseous Diffusion Process buildings was removed from ETTP. Ongoing transfers of remediated land at the site back to the community are on track for Vision 2020, and OREM is establishing plans to move its workforce to Y-12 in the coming years.

ORSSAB was one of the SSABs at the Fall Chairs Meeting in October to jointly endorse the following two items, which were initially written at the Spring Chairs Meeting in May. More information about the other boards organized under the EMSSAB umbrella can be found at [energy.gov/emssab](http://energy.gov/emssab).

## Recommendations on Above Ground Storage at the Waste Isolation Pilot Plant

The EMSSAB chairs said adding temporary storage capacity has the potential to make the TRU waste disposal process at WIPP more efficient. The recommendation was related to DOE's submittal of a modification to its Class 3 Hazardous Waste Disposal Permit with the state of New Mexico.

### Recommendations

Board members were concerned with the lack of available information on the cost of this facility, expected benefits to be derived by more efficient operation of the WIPP facility, or the reduction in risk around the DOE complex.

As such, their recommendations were:

- DOE should seek further efficiencies in the WIPP TRU waste program in order to streamline, expand and accelerate TRU waste disposition.
- DOE should prepare for public review information on the expected benefits and costs of this proposed addition to the WIPP facility in terms of more efficient operation, overall reduction of risk around the DOE complex from an increased rate of disposal of TRU waste, and the impact of the cost of this facility on other DOE facilities.

Further, the boards agreed that allowing nearly a one-year buffer of TRU waste inventory to be safely stored above ground at WIPP for a period of up to one year, would be an appropriate time frame.

Other boards to sign the recommendation were: Idaho National Laboratory Site EM Citizens Advisory Board (CAB), Nevada SSAB, Paducah CAB, Savannah River Site CAB, and Northern New Mexico CAB.



ORSSAB members were last able to tour WIPP in 2012.

## Recommendations on an EM Cleanup Performance Road Map and Communication Strategy

This recommendation came from a request by DOE for the EMSSABs to provide ideas for ways to better identify project accomplishments, risks and challenges associated with cleanup activities to the public.

### Recommendations

Board members eventually decided that two visual roadmaps were needed, not just a text document or outline – one that depicts each site's schedule and key milestones and another showing DOE EM's key cleanup milestones overall.

As a complex-wide communication metric, the members recommended DOE EM identify successfully completed projects as benchmarks (e.g., Fernald and Rocky Flats cleanup sites) when developing performance metrics for similar remediation projects. These metrics might help the public to better understand the project lifecycles and the application of performance metrics used to measure successful project completion.

Members also included a number of suggestions on how DOE should develop these resources:

- Revise metrics so the public can better understand the status of cleanup projects across the complex in the near-term with the intent to quantify and build transparency into the status of specific projects as they move along the continuum of meeting agreements and legally binding dates for cleanup completion.
- Utilize existing resources and simple, visual examples within the department and other government agencies (e.g., U.S. Geological Survey, National Oceanic and Atmospheric Administration).
- Include complex-wide and individual site matrices, information, and success data.
- Communicate crucial, high-level performance indicators that clearly show if schedules are being compromised. In particular, members suggested removing "Safeguards and Securities" and hotel costs from the budget bundle and giving them their own line items to clearly identify significant costs that are not actual cleanup actions.
- Identify key project assumptions and project risks that are crucial to each individual project and the complex-wide schedule.
- Share the challenges and situational realities involved in projects to demonstrate and communicate that DOE understands and acknowledges the difficulties inherent to these complex cleanup missions.

# Board Meetings

## January

Dennis Mayton, DOE, updated the board on OREM's groundwater strategy for the ORR since his last appearance before the board in February 2016.

Mayton said the first large-scale groundwater remediation decisions will be made at ETTP, but a record of decision for that work is not scheduled until 2023.

He also discussed some potential future groundwater projects including the Melton Valley/Bethel Valley Exit Pathway Investigation to fill in groundwater behavior data gaps. Another possible project is the 7000 Area Trichloroethylene Plume Remediation Project at ORNL that would employ bioremediation as a cleanup method.

## February



*OREM has several landfills located near Y-12 to handle various types of wastes produced during cleanup.*

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

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

## March

The board did not meet in March.

## April

The board did not meet in April. Instead, ORSSAB members were encouraged to attend the annual public workshop on the proposed OREM FY 2019 budget request to DOE EM Headquarters. (See page 14 for the recommendation that was developed on this topic.)

## May



*While WIPP was shut down, workers at the Transuranic Waste Processing Center came up with ways to store the backlog of treated waste until it could be disposed of safely.*

At the May meeting two OREM waste management experts, talked about creative ways that were used to dispose of some problematic waste streams that included hazardous and toxic waste, liquid and solid low-level waste, transuranic waste, and liquid and solid mixed waste.

Brian DeMonia, OREM's safety, security, and waste management chief, said at the beginning of fiscal year 2012 there were eight waste streams that had no path for disposal. Some other waste streams that were considered too difficult or too expensive to address. Working with EPA and TDEC, DeMonia said OREM has dispositioned all but one of the original no path waste streams.

Bill McMillan, DOE Portfolio Federal Project Director, gave an update on the disposition of TRU waste from the ORR.

McMillan said 95 percent of the approximately 1,580 cubic meters of contact-handled TRU waste has been processed and 66 percent has been sent for disposal. Of the approximately 671 cubic meters of remote-handled waste, 85 percent has been processed and 26 percent has been shipped for disposal.

## June

David Borak, the designated federal officer for the EM SSAB, visited Oak Ridge from Washington, D.C., and spoke with ORSSAB members about the Federal Advisory Committee Act, which establishes advisory boards like the EM SSABs and how the act governs the way the local advisory boards operate.

## July

The board did not meet in July.

## August



David Adler presents DOE's suggested board topics for fiscal year 2018 to attendees at the ORSSAB Annual Meeting.

Board members and liaisons traveled to Townsend, Tenn., to the Tremont Lodge and Resort for the board's annual meeting. Attendees also included five of the board's six new members for the year.

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

OREM leadership gave a detailed overview of the local cleanup budget and the recommendation process.

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

Kristoff Czartoryski, the board's liaison from TDEC, shared four topics his agency would like addressed: future waste disposal, processing and disposition of TRU waste, assessment of groundwater, and mercury remediation.

## September

### Online



### In Print



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

Ben Williams, DOE public affairs officer, joined ORSSAB at its September 2017 meeting to share the diversity of effort DOE puts into communicating progress and plans for cleanup on the Oak Ridge Reservation to stakeholders.

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

## October



David Branch



Michelle Lohmann



Leon Shields



Bonnie Shoemaker



John Tapp



Tara Walker

As the first meeting of the new fiscal year, DDFO David Adler introduced new members: David Branch, Michelle Lohmann, Leon Shields, John Tapp, and Bonnie Shoemaker. Tara Walker was unable to attend.

For his presentation, Adler updated the board on the newest milestones in “*Vision 2020: Planning for the Future of ETTP Including Reuse, Historic Preservation and Stewardship.*”

The ultimate goal, he said, is for the empty land to be filled with manufacturing facilities that generate jobs, Manhattan Project Historic Park facilities, and conservation/recreation areas. A significant amount of soil removal is ongoing and the work that remains to be done at ETTP is to tear down a number of buildings, including the centrifuge test facilities.

However, several of the sites largest properties have now been, or are in process of being transferred back to the community. Those include land previously home to the K-31 and K-33 sites and the Duct Island parcel.

Of the 14 or so items OREM has chosen to pursue, Mullis’ presentation addressed five involving fieldwork that directly affect Oak Ridge.

1. Establish a path forward for non-radiologically contaminated elemental mercury.
2. Pursue benefits of in-cell macro encapsulation.
3. Evaluate long-term in-place stabilization for some TRU waste at the Molten Salt Reactor at ORNL.
4. Accelerate retrieval of medical isotopes from U-233 waste material.
5. Implement use of remote-handled waste overpacks to enable disposal of ORNL remote-handled TRU waste at WIPP.

## November

Jay Mullis, OREM manager, reported on findings of the DOE EM headquarters’ 45-Day Review at the ORSSAB November 2017 meeting.

In a bid to accelerate cleanup goals and position sites for success, OREM Acting Assistant Secretary Jim Owendoff launched a review process in June.

## December

The board did not meet in December.

# Looking Ahead: 2018 ORSSAB Workplan Topics

Board recommendations are based on topics presented by DOE at the board’s monthly meetings. The board meets the second Wednesday of most months at the DOE Information Center, 1 Science.gov Way, Oak Ridge. Changes to the schedule will be noted on our website, social media and other advertisements.

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

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

## February

DOE representatives will present an Overview of DOE’s Excess Contaminated Facilities in Oak Ridge.

## March

DOE representatives will present Ongoing Efforts to Assure Waste Disposal Capacity for Future Cleanup Operations.

## April

DOE representatives will discuss the FY2020 Budget Formulation and Prioritization of Projects/Baseline.

## May

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

## June

DOE representatives will present an Update on Ongoing Groundwater Protection and Remediation Efforts.

## July

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

## August

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

## September

DOE representatives will present *Vision 2020: Planning for the Future of ETTP Including Reuse, Historic Preservation and Stewardship*

# Other Activities



Two tours of the ORR were organized this year for the board's six new members and two new student representatives. Attending the July tour were (back, L-R) DDFO David Adler, student Cameron Niemeyer, members Leon Shields, John Tapp, David Branch, (front L-R) Bonnie Shoemaker, and Michelle Lohmann. A new staff member, Shelley Kimel, also joined the tour.

## Understanding the Mission

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

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

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

Belinda Price represented ORSSAB at the ground-breaking of the Mercury Treatment Facility at Y-12.







Attending the 2017 Spring Chair's Meeting in Paducah, Ky. were (clockwise from back left) David Hemelright, Ben Williams, Belinda Price, and Dennis Wilson

## Working Better Together

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

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

ORSSAB's Dennis Wilson and Richard Burroughs toured the Hanford Site's B Reactor Museum as a precursor to the Fall Chair's Meeting held in nearby Kennewick, Wa.





Members Venita Thomas, Martha Deaderick, Rosario Gonzalez, and Kathryn Bales toured the Transuranic Waste Processing Center.

## Making Progress

On tours this year board members were able to see firsthand some of the risk-reduction and stabilization work completed with a \$28-million funding plus-up in FY16 earmarked for excess contaminated facilities.

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

Members explored how OREM handles waste management with a visit to disposal sites and discussed potential future waste disposal options. A visit to the Transuranic Waste Processing Center allowed members to see how hazardous materials are disposed of safely. They also visited groundwater sampling wells to understand OREM’s longterm commitment to clean water.

# Members & Liaisons

*The following are members and student representatives who served during all or part of FY 2017.*



*Leon Baker*

Leon Baker is a health physicist with ARS, Inc., which supports DOE's Office of Environmental Management in its cleanup efforts. He was previously employed as a senior radiation protection technician with Spectra Tech Contracting Services, which supports multiple building decontamination and decommissioning projects at DOE facilities. Prior to that he was a logistics coordinator with DOW Chemical. He worked at Oak Ridge Associated Universities in Oak Ridge and also worked at the Savannah River Site for almost 20 years.

Leon received an MBA from Brenau University in Gainesville, Ga.; a master's in education from South College in Knoxville; a bachelor's in health care management from Southern Illinois University in Carbondale, Ill.; and an associate's in science and mechanical engineering technology from Pellissippi State Community College in Knoxville. He is presently completing his bachelor's in industrial engineering at East Tennessee State University in Johnson City.

Leon lives in Oak Ridge and is a member of the National Society of Black Engineers, Sigma Alpha Lambda, Phi Kappa Phi, NAACP Oak Ridge Chapter, the National Health Physics Society and its local chapter, Habitat for Humanity Selection Board, and the Oak Ridge Education Board. He is a Knoxville Area Rescue Ministries volunteer and a youth mentor and tutor.



*Kathryn Bales*

Kathryn Bales is an intern at the Center for Radiation Protection Knowledge at ORNL.

She recently received her bachelor's in nuclear engineering from the University of Tennessee and is a member of the national and local chapters of the Health Physics Society.

She plans to attend graduate school to pursue a career in medical physics. Kathryn lives in Knoxville.



*Christopher Beatty*

Christopher Beatty is a quality assurance engineer with Innovative Design Inc., which provides support for the U.S. International Thermonuclear Experimental Reactor project at ORNL. He has also served as a senior systems engineer on the project.

Before that he was employed with Jacobs Technology as a team lead for the Risk Management and Systems Engineering Planning Team and the System Integration Functional Analysis Team for NASA in Huntsville, Ala.. He has also worked with the U.S. Space Army and Missile Defense Command in Huntsville and the University of Tennessee Space Institute in Tullahoma, Tenn.

Christopher received a master's in physics from Clark Atlanta University and a bachelor's in physics from the Georgia Institute of Technology. He is the current president of the local chapter of the National Society of Black Engineers and a member of 100 Black Men of America, the American Society of Mechanical Engineers, the Project Management Institute, and the International Council of Systems Engineers. He is a resident of Knoxville.



*David Branch*

David Branch was a rural letter carrier for the U.S. Postal Service in Knoxville for 20 years until his retirement in 2013.

He was previously employed in the health care field and studied nursing at Walter State Community College in Morristown. He lives in Knoxville.



*Richard Burroughs*

Richard Burroughs has served as the chief of staff in the Anderson County mayor's office since 2012. Prior to that post, his professional experiences were related to his background as a registered professional geologist with extensive hydrogeological expertise in aquifer characterizations and remediation in soil and groundwater environments.

His employment history includes 25 years working primarily with Resource Conservation Recovery Act and CERCLA projects in a variety of states.

Richard received his bachelor's and master's in geology from Southern Illinois University and the University of Arkansas, respectively. He is a resident of Oak Ridge.



*Martha Deaderick*

Martha Deaderick is a retired educator from Kingston who worked for the city school system in Oak Ridge from until 2004, where she specialized in English, social studies, Tennessee history, and special education.

She received her bachelor's in education and a Special Education Certification from the University of Tennessee. She is a member of the Roane County Environmental Review Board, the Tennessee Citizens for Wilderness Planning, and Oak Ridge Schools Retired Teachers.



*Rosario Gonzalez*

Rosario Gonzalez is the cafeteria manager at St. Mary's Catholic Church in Oak Ridge, where she has been employed since 1986.

She previously worked as a secretary in Toureon, Mexico, where she received her Secretarial Academy Certification.

Rosario received her GED from Pellissippi State Community College in Knoxville. She lives in Oak Ridge.



*David Hemelright*

Dave Hemelright is the K-12 Facilities Specialist for Kaatz, Binkley, Jones & Morris Architects Inc., specializing in Tennessee public school planning, design and construction and maintenance.

He serves on the board of the Tennessee School Plant Management Association, American Truck Historical Society, and has served on the Loudon County Planning Commission. He received his B.A. in American history from Hobart College. Dave lives in Lenoir City.



*Eddie Holden*

Eddie Holden is a retired transportation logistics manager who most recently worked with OREM. Before that he worked for 31 years as a transportation logistics manager with Yellow Freight and served in various locations across the United States.

He received a bachelor's in transportation logistics from UT in Knoxville, Tenn. A native Oak Ridger, he is now a resident of Knoxville.



*Michelle Lohmann*

Michelle Lohmann is a human resources director for U.S. Cellular. Previously she was the program manager for the University Recruiting and Graduate Education Programs for ORNL in collaboration with the University of Tennessee, Knoxville.

Michelle supports several local not-for-profit organization chapters, including the United Way of Greater Knoxville, Mobile Meals, the American Heart Association, and Volunteer East Tennessee, as well as several national charitable foundations. She lives in Lenoir City.



*Belinda Price*

Belinda Price is a senior hydrogeologist with Alliant Corp. She has more than 30 years of experience in environmental investigation and environmental remediation as a geologist, hydrogeologist, and project manager.

She is a licensed Professional Geologist in several states and is a member of the Geological Society of America. She is a past Associate Editor of Groundwater, the flagship journal of the National Groundwater Association.

Belinda received her master's in hydrogeology from University College London and her bachelor's in geology from the University of Bristol in the U.K. She lives in Knoxville.



*Leon Shields*

Leon Shields is the supervisor for field operations for the Lenoir City, Tenn. Utilities Board, where he has worked for more than 20 years. He is also the owner of Instructional Concepts, which provides training in industrial, public, and private application of firearms, explosives, vehicle extrication, and rescue operations.

He is a firearms instructor/deputy for the Loudon County Sheriff's Office, an instructor/third party examiner for the State of Tennessee, a fire fighter director with Loudon County Fire Rescue, chairman of the Lenoir City Planning Commission/Board of Zoning Appeals, a commissioner with the Lenoir City Housing Authority/Rural Development, and a commissioner with the Loudon County Regional Planning Commission.

He is a member of a number of civic organizations, including the Boys and Girls Clubs of Tennessee Valley, Lenoir City High School Technical Advisory Board, Loudon County Chamber of Commerce, Demolay International, and the Fraternal Order of Police. Leon lives in Lenoir City.



Bonnie Shoemaker retired in 2008 after 34 years at ETPP and ORNL, working in a variety of capacities, including chemical laboratory analyst, environmental compliance specialist, plant shift superintendent, emergency management specialist, and engineering technician.

*Bonnie Shoemaker*

She is the recipient of two awards for operations and technical support in environmental compliance and emergency management. She received her bachelor's in biology from the University of Tennessee. Bonnie lives in Clinton.



Deni Sobek lives in Oak Ridge and is a teacher with Oak Ridge Schools.

*Deni Sobek*

She received her bachelor's in botany from Iowa State University and a teaching certification in science from Texas Tech University. She is a member of the National Science Teachers Association and the Tennessee Teachers Association.



*Fred Swindler*

Fred Swindler retired as the vice president of IsoRay Medical Inc. He continues to act as a consultant in regulatory affairs for the Washington-based company, which provides innovative approaches to cancer treatment and diagnosis through proprietary medical isotope technologies.

He was previously employed as a vice president for quality assurance and regulatory affairs with two other medical manufacturing companies.

He received an MBA from the University of Evansville, Ind. and a bachelor's in biomedical engineering from Rose Hulman Institute of Technology in Terre Haute, Ind. Fred lives in Rockwood.



*John Tapp*

John Tapp is a retired civil/environmental engineer. He began his career in the federal government as a Commissioned Officer in the U.S. Public Health Service and with the EPA. He co-founded and helped grow a Kentucky environmental and engineering consulting firm. After his first retirement from consulting, he

managed a municipal water, wastewater and stormwater utility and managed statewide water and wastewater planning for the Kentucky Infrastructure Authority.

He has served on the board of several civic and professional organizations including as president of the Kentucky-Tennessee Water Environment Association and a member of the University of Kentucky Engineering Alumni Association and the Kentucky Society of Professional Engineers.

He has doctoral, master's and bachelor's degrees in engineering from the University of Kentucky with specialization in soil and water resources. He has over 50 publications and papers presented. John lives in Powell.



*Venita Thomas*

Venita Thomas is an occupational safety and health specialist with Alliant Corp., which provides services for the Safety Services Division of ORNL. She is certified as a Registered Environmental Manager. Venita was previously an environmental compliance consultant for Navarro Research and Engineering at the DOE Savannah River Site in Aiken,

S.C. Her career includes work as an environmental and safety specialist with South Carolina Electric and Gas and as a senior environmental engineer and radiological control/health physics inspector with Westinghouse Savannah River

She received a master's in occupational safety and health/environmental management from Columbia Southern University in Orange Beach, Ala. and a bachelor's in chemistry from Columbia College in Columbia, S.C.

She is a member of the Tennessee Valley Section - American Industrial Hygiene Association, the Oak Ridge Chapter of Delta Sigma Theta Sorority and the Knoxville Chapter of Jack & Jill of America. She is a graduate of Leadership North Augusta. Venita lives in Knoxville.



*Ed Trujillo*

Ed Trujillo retired as a project manager from Bechtel Corp. in 2012. He most recently managed the engineering and construction of a maintenance facility for heavy duty mining equipment in Chile in 2011-2012. From 2008 until 2011, he managed three environmental projects for Bechtel at ETPP.

During his 35-year career, he has worked on a wide variety of projects for DOE, the U.S. Air Force, and private sector facilities. He received a bachelor's in engineering from the University of Wisconsin. Ed lives in Oak Ridge.



Tara Walker

Tara Walker graduated with an associate's degree in May 2016 from Pellissippi State Community College. She is currently pursuing a bachelor's in chemical engineering from Tennessee Technological University. She is an assistant teacher at Starting Points Day Care in Knoxville and has also served as a supplemental instructor at Pellissippi State and an intern at ORNL.

Her volunteer efforts include time as a Tennessee Promise Mentor to incoming freshmen at Pellissippi State, a Tennessee Achieves ambassador, a soccer coach, and a volunteer peer tutor.

She finished first in the Tennessee Mathematical Association of Two-Year Colleges competition at Pellissippi State, and received the Tennessee Space Grant Consortium for women in engineering, funded by NASA. Tara lives in Knoxville.



Rudy Weigel

Rudy Weigel is a retired industrial hygienist who most recently worked for Concurrent Technologies Corp. in Johnstown, Penn. conducting industrial hygiene surveys at various U.S. Army installations in support of the Army Public Health Command. From 2002 to 2011 he served as a senior industrial hygienist/safety and health representative providing safety and

health oversight during hazardous waste site remediation and D&D activities at ORNL and ETTP with Bechtel Jacobs. He also provided industrial hygiene oversight of the Waste Management Division at Y-12 for LMES. His 36-year career has included work as a bioenvironmental engineer with the U.S. Air Force, environmental scientist, and hazardous waste program coordinator.

He received a master's in environmental health from East Tennessee State University and a bachelor's in occupational health and safety from Utah State University. Rudy lives in Oak Ridge.



Dennis Wilson

Dennis Wilson is a retired technology manager. He served as director of technology and intellectual property at Johnson Diversey Products (now Sealed Air) until 2009. While much of his 39-year career was focused on technology and intellectual property management, his early career included work as a resin and polymer chemist, for which he was awarded seven global patents.

He received a doctorate and master's in material science from the University of Connecticut, a bachelor's in chemistry from the University of Wisconsin - Parkside, and has certifications in a wide range of technology and management courses. Dennis lives in Rockwood.



Phil Yager

Phil Yager is the Anderson County commissioner for District 8 in Oak Ridge. He is a retired investment services manager who worked as a vice president for Goelzer Investment Management in Indianapolis, Ind.

He is an active volunteer and community leader who serves on the Oak Ridge Industrial Development Board as well the Oak Ridge Board of Building and Housing Code Appeals. Phil is also treasurer of the Emory Valley Center and volunteers his time with many civic organizations. He lives in Oak Ridge.

### Agency Liaisons



Jay Mullis  
OREM manager



Dave Adler  
OREM division director



Melyssa Noe  
OREM branch chief



Connie Jones  
EPA



Kristof Czartoryski  
TDEC

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