

Oak Ridge Site Specific Advisory Board Annual Planning Meeting



Wednesday, August 9, 2023, 6 p.m.

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.

CONTENTS

AGENDA

CALENDARS

1. August
2. September (draft)

BOARD MINUTES/RECOMMENDATIONS & MOTIONS

1. Draft June 14, 2023, Full Board Meeting minutes for approval
2. Draft Recommendation 255 on Groundwater Remedy Selections at ETPP

REPORTS & MEMOS

1. OREM Response to Request for Topics
2. FY 2023 Incoming Correspondence
3. FY 2023 Travel Opportunities
4. Draft ORSSAB officer slate for FY 2024
5. Public Comment #1
6. Abbreviations & Acronyms



Oak Ridge Site Specific Advisory Board
Annual Meeting
Wednesday, August 9, 2023, 6 p.m.
DOE Information Center & Virtually via Zoom

OBJECTIVES

1. Develop an increased understanding of and commitment to the goals of the board
2. Begin development of the FY 2024 work plan

AGENDA

6:00–6:05 Welcome (5)

- Opening Remarks – L. Shields
- Comments from agency representatives – M. Noe
 - Recognition of outgoing members
- Comments from R. Petrie, K. Czartoryski, S. Urquhart-Foster

6:05–6:30 OREM Program Overview and Updates – E. Sutton (25)

6:30–7:40 Work Plan Topics (1 hour 10 min)

- Presentations by Agencies – R. Petrie, K. Czartoryski, S. Urquhart-Foster
15 minutes presentation, 5 minutes Q&A each
- Suggestions from Members (10)

7:40–7:45 Process and Plan for Issue Groups – M. Noe (5)

7:45–7:50 Public Comment Period (5)

This ends the presentation portion of the meeting

7:50–7:55 Board Business (5)

- Officer nominations - M. Noe
- June 14, 2023 Meeting Minutes – M. Lohman
- Update on EM Stewardship – M. Sharpe
 - Date rescheduled to November 29

7:55–8:00 Closing Remarks – M. Noe, L. Shields (5)

- FY 2024 Board Photo
- Next Meeting – EM SSAB Chairs Meeting Oct. 3-5

Erin Sutton serves as the Director of the Quality and Mission Support Division for the Department of Energy's Oak Ridge Office of Environmental Management (OREM).

She oversees activities including quality assurance, regulatory and environmental compliance, reindustrialization, and community outreach.

Her career includes more than 20 years of experience working with multiple federal and state environmental regulatory agencies and private sector environmental services companies.



Oak Ridge Site Specific Advisory Board

August

2023

Topic: Annual Planning Meeting for FY 2024

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
6	7	8	9 Annual Planning Meeting – 6-8 p.m. (hybrid)	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	28	29	30	31	

For information about attending meetings virtually or in person, please email orssab@orem.doe.gov at least 1 week prior to the scheduled meeting.

ORSSAB Support Office: (865) 241-4583 or 241-4584

DOE Information Center: (865) 241-4780



Draft - September

2023

Topic: None

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4 Offices closed for Labor Day holiday	5	6 NO Meeting	7	8	9
10	11	12	13 NO Meeting	14	15	16
17	18	19	20	21	22	23
24	25	26	27 NO meeting	28	29	30

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Many Voices Working for the Community

Oak Ridge Site Specific Advisory Board

Monthly Meeting of the Oak Ridge Site Specific Advisory Board

DRAFT June 14, 2023 Meeting Minutes

The Oak Ridge Site Specific Advisory Board (ORSSAB) held its monthly meeting virtually via Zoom and in person at 1 Science.gov Way on Wednesday, June 14, 2023 at 6 p.m. Copies of referenced meeting materials are attached to these minutes. A video of the meeting was made and is available on the board's YouTube site at www.youtube.com/user/ORSSAB/videos.

Members Present

Kris Bartholomew
Mary Butler
Harold Conner, Jr.
Paul Dill
Amy Jones

Noah Keebler
Harriett McCurdy
Michelle Lohmann
Mike Mark
Christine Michaels

Michael Sharpe
Leon Shields
John Tapp

Members Absent

Atilio Anzellotti
Rosario Gonzalez

Thomas McCormick
Bonnie Shoemaker

Tom Tuck¹

¹Third consecutive absence

Liaisons, Deputy Designated Federal Officer, and Alternates Present

Melyssa Noe, ORSSAB Deputy Designated Federal Officer (DDFO), OREM
Roger Petrie, ORSSAB Alternate DDFO, OREM
Kristof Czartoryski, Tennessee Department of Environment and Conservation (TDEC)
Samantha Urquhart-Foster, EPA

Others Present

Bob Gelinas, UCOR
Shelley Kimel, ORSSAB Staff
Heather Lutz, TDEC
Eileen Marcillo, TDEC
Brian Murray, Pro2Serve
Sara McManamy-Johnson, ORSSAB Staff

Abby Newberry, OREM
Belinda Price, Pro2Serve
Sam Scheffler, OREM

Six members of the public were present.

Liaison Comments

Ms. Noe – Ms. Noe told members the DOE had held two public comment meetings about two separate groundwater Records of Decision (RODs) for the East Tennessee Technology Park (ETTP). She said public comment periods for both documents were closed as of the prior Monday, and DOE will proceed to work with EPA and TDEC to move those forward. She said the documents are very important in that they allow DOE to plan the remaining work to complete cleanup work at ETTP. She then said crews continue to make steady progress at the Oak Ridge National Laboratory (ORNL) with the demolition of the Low-Intensity Test Reactor in the central campus scheduled for completion in the summer. She said that will mark the second reactor removed in the span of a year. She said removing those structures both eliminates risks, but also gives crews the space needed to take down another larger reactor nearby.

She next told members that DOE had officially broken ground on the K-25 Viewing Platform at ETTP. She said Geiger Brothers was awarded the contract for construction, and DOE plans to hold a celebration at its completion next year.

Ms. Noe then said UCOR and Tennessee Technological University (TTU) recently signed an agreement that will create more internship opportunities for students. She said UCOR is also providing resources and expertise as the school prepares to launch a nuclear engineering program in Fall 2024, which can have great benefits for DOE's workforce development efforts in the future.

Mr. Czartoryski – No comments.

Ms. Urquhart-Foster – Ms. Urquhart-Foster said EPA and DOE recently signed an interagency agreement stating that DOE will provide funding for up to three additional EPA staff members to work on groundwater at ETTP. She said that will allow EPA to turnaround document reviews faster.

Presentation

Ms. Jones introduced OREM's Roger Petrie to present on OREM's ETTP K-31/K-33 Groundwater Proposed Plan.

Mr. Petrie said members would likely recognize much of the presentation from the presentation on the Main Plant Groundwater Proposed Plan (May meeting) because a lot of the basic information, such as how the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) works, is the same. He then gave members an overview of the background on the K-31/K-33 proposed plan. He said its purpose is to give the public an idea of what DOE's preferred alternative is for remediation of the site and to give the public the opportunity to provide feedback. He said for this area, the preferred alternative is monitored natural attenuation (MNA) with land use controls, including deed restrictions prohibiting any use of groundwater on the property. He said that deed restriction is not limited to ETTP; it applies to any property DOE has released.

Next, Mr. Petrie gave members an overview of the cleanup strategy and timeline at ETTP, from the Tri-party Federal Facility Agreement signing in 1991, through early actions in the 1990s, the Watershed Interim ROD signing in the 2000s, ETTP building demolitions and soil remedial activities through the present, and the current focus shift to groundwater at ETTP.

He said ETTP groundwater RODS apply to three geographical areas: K-31/K-33, Main Plant, and Zone One. He said the scope of the K-31/K-33 Proposed Plan is limited, with contaminants detected in a

limited number of groundwater monitoring wells. He added that overall concentrations have exhibited a downward trend since monitoring began in the late 1980s. He said the good news is that recent sampling results show concentrations are currently above drinking water standards. In the last comprehensive sampling round for the K-31/K-33 Remedial Investigation and Feasibility Study, only 2 of the 21 wells yielded samples with constituents slightly above drinking water standards.

As part of the process, he said, DOE must evaluate different alternatives, including what would happen if no action were taken, although that alternative is never selected. For the K-31/K-33 Area, DOE evaluated three alternatives, including Alternative 1, no action; Alternative 2, monitored natural attenuation and land use controls; and Alternative 3, pump and treat for specific locations with monitored natural attenuation and land use controls. He said the preferred alternative was Alternative 2, monitored natural attenuation with land use controls, and he gave an outline of the CERCLA decision criteria used to analyze the three alternatives. These criteria included threshold criteria such as overall protection of human health and the environment and compliance with applicable or relevant and appropriate requirements; balancing criteria such as long-term effectiveness and permanence, reduction of toxicity, mobility or volume through treatment, short-term effectiveness, ability to implement, and cost; and modifying criteria such as state acceptance and community acceptance.

Mr. Petrie then went into further detail about DOE's preferred alternative. He said monitored natural attenuation is an EPA-approved groundwater remediation approach that involves careful monitoring of natural processes that reduce concentrations of contaminants in groundwater. The process involves continuous monitoring of groundwater conditions to measure and evaluate progress toward achieving remedial action objectives and until cleanup levels are attained. He said natural attenuation processes are applicable to chromium, nickel, and other inorganic contaminants in the K-31/K-33 area.

The first step of the remedy is to develop a Remedial Action Work Plan that defines monitoring, evaluation, and reporting. Monitoring will be quarterly for the first two years, then semi-annually, with monitoring results reported annual to EPA and TDEC along with an assessment of progress toward groundwater restoration. He said land use controls related to groundwater use and potential exposures to contaminated groundwater have been implemented with monitored natural attenuation actions forthcoming.

Mr. Petrie said existing monitoring wells will be a key part of the preferred alternative, and DOE will work with EPA and TDEC to determine if additional wells are needed. He said accessing existing wells for sampling or installing new wells will not impact current or future land uses or redevelopment.

Next, Mr. Petrie discussed the remedial action objectives for the K-31/K-33 area: restoration of groundwater to federal and state drinking water standards; prevention of exposure to or consumption of contaminated groundwater while cleanup goals are pursued; and prevention of adverse impacts to surface water from the migration and discharge of contaminated groundwater into surface water.

Board members asked the following questions:

- Ms. Michaels asked for clarification on what groundwater uses in the area would be permitted under land use controls. Mr. Petrie said the groundwater could not be used at all, regardless of purpose.

- Ms. McCurdy asked how the location of a monitoring well is selected. Mr. Petrie said piezometers are used throughout the site to determine the groundwater flow pattern, which then helps determine most efficient placements.
- Mr. Bartholomew asked when DOE expects the water constituent levels to reach minimum drinking water standards. Mr. Petrie said if the data stays consistent, those levels have already been reached. He said there are three quarters of testing data showing chromium and nickel levels in those wells in the target range.
- Mr. Tapp asked whether land use controls would allow groundwater usage for industrial purposes such as lawn care. Mr. Petrie said they would not; no usage is allowed.

Questions from the Public

- Mr. Luther Gibson asked where the monitoring results will be reported and available. Mr. Petrie said the data from the Remediation Effectiveness Reports (RERs) will be included in the ROD and each ROD will eventually have a Remedial Action Report (RAR), which is essentially a closing document, and the data will also be reported there in some format.

Public Comment

- Public Comment #1 – Mr. Luther Gibson shared comments on the board’s activities and plans for future activities. (See attached)

Board Business/Motions

- Mr. Shields asked for a motion to approve meeting minutes.
 - 6.14.23.1 Motion to approve May 10, 2023 meeting minutes
Motion made by Ms. Jones and seconded by Ms. McCurdy. Motion passed.
- Mr. Shields announced upcoming FY 2024 officer vacancies and elections. He encouraged members to actively participate and asked them to notify staff if interested.

Responses to Recommendations & Alternate DDFO Report

Ms. Noe told members that OREM received the board’s budget recommendation and she forwarded it to the DDFO and those responsible for budget at headquarters. She said the board’s membership package is more than halfway through the process, having completed 8 out of 15 steps. Next, Ms. Noe told members the Annual Planning Meeting would be held Wednesday, August 9 from 6-8 p.m., following the same format as the one used in October because most members wanted the reduced two-hour format.

Committee Reports

Executive – None. Next meeting to be scheduled.

EM & Stewardship – Ms. McCurdy said the groundwater issue group has a rough idea for a groundwater recommendation, and Ms. Butler said the issue group had decided to draft one groundwater

recommendation, as opposed to two separate K-31/K-33 Area and Main Plant Area recommendations, and she volunteered to compile the issue group discussion into a draft document. Next meeting June 28 at 6 p.m.

Additions to the Agenda & Open Discussion

None.

Action Items

None

The meeting adjourned at 7:05 p.m.

I certify that these minutes are an accurate account of the June 14, 2023, meeting of the Oak Ridge Site Specific Advisory Board.

Leon Shields, Chair

Michelle Lohmann, Secretary

August 9, 2023

Oak Ridge Site Specific Advisory Board

ML/sbm



Oak Ridge Site Specific Advisory Board Recommendation ___ : Recommendations on Groundwater Remedy Selections in the Main Plant and K-31/K-33 Areas at the East Tennessee Technology Park at the U.S. Department of Energy Oak Ridge

Reservation, Oak Ridge, Tennessee

Background

As a result of past research and industrial activities on the Oak Ridge Reservation (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. The Department of Energy's Oak Ridge Office of Environmental Management (OREM), in partnership with regulators at the U.S. Environmental Protection Agency (EPA) and the Tennessee Department of Environment and Conservation (TDEC), used findings from groundwater research, sampling, and analysis over the decades to develop a groundwater strategy document (DOE/OR/01-2628). Several strategy objectives were identified to guide the path forward for groundwater remediation on the ORR and these strategies were integrated into the Federal Facility Agreement (FFA), which sets milestones for cleanup actions on the ORR.

Early actions were taken in the 1990s for off-site contamination and high-risk/high-priority releases. In the 2000s, Watershed Interim Records of Decision (RODs) were signed to address contaminant sources and building demolition projects.

In 2020, OREM completed removal of all contaminated and unneeded buildings at East Tennessee Technology Park (ETTP) as part of the Vision 2020 project, with soil remedial actions slated for completion within the following year. Now, the site will be the focus of the first large-scale decisions on groundwater for the Oak Ridge Reservation (ORR).

ETTP is divided into three sections for groundwater remediation planning. One section is the Main Plant Area, which encompasses most of the operations area at the former enrichment complex. Another section is the area where the large K-31 and K-33 uranium enrichment buildings once stood. The third section is called Zone 1, which is the area immediately surrounding the Main Plant and K-31 and K-33 areas.

Discussion

The Proposed Plan for an Interim ROD for Groundwater in the Main Plant Area at ETTP (DOE/OR/01-2921&D2/R1) was released for public input in January 2023. The scope covered by the Proposed Plan includes six areas of groundwater contamination (i.e., groundwater plumes) within the Main Plant Area. These areas are located below the water table in the unconsolidated weathered soil/rock and bedrock zones.

The Proposed Plan for the Record of Decision for Groundwater in the K-31/K-33 Area (DOE/OR/01-2922&D2) was released for public input in March 2023.

The proposed plans describe the alternatives analyzed, identify the preferred alternative for each respective area, and explain the rationale for each preferred alternative.

DOE accepted public comments on both proposed plans, with comments accepted on the Main Plant Area

DRAFT

plan from April 5, 2023, through May 19, 2023, and on the K-31/K-33 Area plan from April 26, 2023, through June 12, 2023.

The Oak Ridge Site Specific Advisory Board (ORSSAB) has been interested in the status of groundwater on and around the ORR for several years, and during that time OREM and contractor experts have provided several presentations on groundwater conditions. Most recently, Regulatory Affairs Specialist and FFA Projects Manager Roger Petrie presented board members with information on groundwater at ETTP on May 10, 2023, and June 14, 2023, with the presentations covering the Main Plant Area proposed plan and the K-31/K-33 Area proposed plan, respectively.

ORSSAB members also toured groundwater sites at ETTP on June 6, 2023, and the EM & Stewardship Committee had detailed discussions on May 24, 2023, and June 28, 2023.

Recommendations

Main Plant Area

Based on previous positive outcomes using enhanced in-situ bioremediation and its relatively low cost, ORSSAB supports its selection as the preferred alternative as detailed in the “Proposed Plan for an Interim Record of Decision for Groundwater in the Main Plant Area at the East Tennessee Technology Park, Oak Ridge, Tennessee” – dated January 2023. However, our concerns remain about the predictive positive outcomes being complicated by the uniquely complex hydrogeology in the area combined with additional contaminants of concern within the six targeted TCE plumes. Therefore, ORSSAB recommends the following after the first significant injection:

1. In addition to monitoring the six treated plumes, monitor downgradient and around those plumes to determine if the contaminants have migrated.
2. Monitor the microorganisms to evaluate continued viability.
3. Report the results of monitoring and evaluation to ORSSAB once this information is available.

K-31/K-33 Area

Based on information presented showing that the forces of nature appear to be lowering concentrations of contaminants in the K31/K33 area to acceptable levels, ORSSAB supports the selected alternative of monitored natural attenuation along with land use controls in this area.



Department of Energy

Oak Ridge Office of Environmental Management
P.O. Box 2001
Oak Ridge, Tennessee 37831

July 21, 2023

Mr. Leon Shields
Chair
Oak Ridge Site Specific Advisory Board
Post Office Box 2001
Oak Ridge, Tennessee 37831

Dear Mr. Shields:

FISCAL YEAR 2024 TOPICS FOR THE OAK RIDGE SITE SPECIFIC ADVISORY BOARD

Reference: Letter from Leon Shields to John Mullis, *Request for FY 2024 Topics for the Oak Ridge Site Specific Advisory Board*, dated June 21, 2023

Thank you for your recent letter requesting suggestions for topics on which to focus the resources of the Oak Ridge Site Specific Advisory Board (ORSSAB) during Fiscal Year (FY) 2024. The ORSSAB input on the following program areas in FY 2024 would be most appreciated:

1. Excess Facilities Risk Reduction of Activities at Oak Ridge National Laboratory (ORNL) and Y-12 National Security Complex

The U.S. Department of Energy (DOE) is working to address many deteriorating “excess” or unused buildings that pose environmental hazards, impact worker safety, and hinder mission progress at DOE sites in Oak Ridge. The ORSSAB continued awareness on this project is requested.

2. Participation in Ongoing Efforts to Assure Sufficient Waste Disposal Capacity

Provision of additional disposal capacity continues to be of paramount importance to the Oak Ridge cleanup program so we can transition from the cleanup of the East Tennessee Technology Park (ETTP) to the Y-12 National Security Complex and ORNL without interruption. The ORSSAB continued input on this project is requested.

3. Provision of Input into the FY 2026 Budget Development Effort

The ORSSAB annual participation in this effort remains important, particularly with a focus on establishing program priorities. The ORSSAB continued input on project prioritization is requested.

4. Aquatic Ecology Research and Technology Development in East Fork Poplar Creek

Mercury is a high priority challenge to the cleanup mission for the DOE Oak Ridge Office of Environmental Management. Through partnership of the ORNL Aquatic Ecology Laboratory, the Oak Ridge Office of Environmental Management is developing new and better way to remove mercury from the environment. DOE would like to brief the ORSSAB on recent progress in addressing contamination sources in the soil and groundwater, removing existing contamination in water and streambeds, and decreasing mercury concentrations in fish and other animals.

FISCAL YEAR 2024 TOPICS FOR THE OAK RIDGE SITE SPECIFIC ADVISORY BOARD

5. ETTP Main Plant Groundwater Remedy Selections

During the May 2023 and June 2023 meetings, ORSSAB was briefed on the ETTP Main Plant and K-31/K-33 Area Groundwater Remedy Selections. The ORSSAB continued input on this important decision is requested. We would like to brief the ORSSAB on activities related to the groundwater remedy selections.

We look forward to providing additional information concerning these topics during the ORSSAB retreat in August 2023.

If you have any questions or if we can be of further assistance, please contact Melyssa Noe at 241-3315 or me at 576-0742.

Sincerely,

**JOHN
MULLIS**

Digitally signed by JOHN
MULLIS
Date: 2023.07.21
13:41:59 -04'00'

John A. Mullis II
Manager

cc:

Samantha Urquhart-Foster, EPA Region 4
Kristof Czartoryski, TDEC, Oak Ridge
Mike Koentop, EM-90
Abby Newberry, EM-942
Melyssa Noe, EM-942
Roger Petrie, EM-942
Laura Wilkerson, EM-90
Ben Williams, EM-942



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Division of Remediation - Oak Ridge
761 Emory Valley Road
Oak Ridge, Tennessee 37830

August 9, 2023

Mr. Leon Shields, Chair
Oak Ridge Site Specific Advisory Board
P.O. Box 2001
Oak Ridge, Tennessee 37831

Dear Mr. Shields

Fiscal Year 2024 Topics for the Oak Ridge Site Specific Advisory Board

Thank you for your request for input from the Tennessee Department of Environment and Conservation (TDEC) on issues for the Oak Ridge Site Specific Advisory Board (ORSSAB) to consider during Fiscal Year (FY) 2024. The TDEC Division of Remediation, Oak Ridge Office recommends the following program areas where stakeholder comments and recommendations would be most beneficial:

1. Future disposal for the Environmental Management generated waste

TDEC is committed to ensuring that the Environmental Management Disposal Facility (EMDF) landfill is constructed to prevent any waste disposed at the EMDF landfill from being released into the surrounding environment.

The protectiveness of the EMDF depends on the design and on the long-term stewardship necessary to safely contain mercury and radioactive contaminants that will remain a threat to public health and the environment forever.

ORSSAB can play an important role in supporting the Federal Facilities Agreement (FFA) parties (Environmental Protection Agency (EPA), U.S. Department of Energy (DOE), and TDEC) in providing input and sharing with public information pertaining to the proposed landfill. This includes final design details based on planned groundwater studies and waste acceptance criteria, as well as refined wastewater management plans based on final design and ongoing/future data collection efforts.

2. The East Tennessee Technology Park Main Plant Groundwater Remedy Selections

TDEC is working with DOE and EPA on the path forward to eventually return usable groundwaters to their beneficial uses wherever practicable, within a time frame that is reasonable given the particular circumstances of the site.

The interim remedial action objective at ETPP Main Plant Area is to substantially reduce Chlorinated Volatile Organic Compounds (CVOCs) contaminant mass in six areas of groundwater contamination. While this interim action concentrates on CVOCs and Technetium-99, agencies realize that more work is needed to address remaining groundwater plumes and contaminants like inorganics, metals, Polychlorinated Biphenyls, and other radionuclides.

ORSSAB engagement will increase public awareness of the magnitude of the groundwater cleanup needs, including additional groundwater characterization efforts to delineate the extent of contamination and the prevention and/or minimization of further migration of the contaminated groundwater plumes.

3. Excess Facilities Risk Reduction and Decontamination & Decommissioning at ORNL and Y-12 National Security Complex – Mercury treatment and Disposition

Releases of mercury from the Y-12 National Security Complex continue to exceed State of Tennessee and EPA water quality criteria. The FFA parties (EPA, DOE and TDEC) agreed that the Outfall 200 water treatment plant needs to be operating prior to the commencement of the Decontamination and Decommissioning (D&D) of Beta 4, Alpha 5, and Alpha 4 in an order to capture as much mercury discharge from those sites as possible.

While removal of the many deteriorating building removes the risk these structures pose, the planning and execution of this process is critical in preventing further unmitigated releases of mercury to the East Fork Poplar Creek from the spills and soils that will be exposed.

This work is currently done by DOE under the Removal Action process that provides regulators (EPA, TDEC) an opportunity to comment on plans and documents but does not provide them with an ability to approve or disapprove DOE actions.

ORSSAB participation and awareness of strategies for buildings D&D, mercury waste remediation and management would increase public awareness of the nature of the environment risks associated with the environmental cleanup at Y-12 National Security Complex.

4. Processing and disposition of Transuranic (TRU) waste

TDEC is working with DOE on the path forward to disposition transuranic sludge stored in Melton Valley Storage Tanks. Though currently stable and safely stored, this waste stream represents one of the highest levels of risk to the public and the environment. The successful design and construction of the sludge treatment facility requires a steady fiscal environment.

Input from ORSSAB on these matters will increase public awareness of transuranic wastes in need of disposition.

5. Meaningful collaboration around cleanup project (and budget) prioritization and the DOE Budget Development Effort

DOE headquarters issues an annual guidance letter to sites on the need for budget prioritization and consultation process with states, tribes, and stakeholders. However, implementation of this process varies from site to site.

The ORSSAB input on project prioritization process could increase awareness and assist in formulation of budget priorities.

TDEC will be glad to discuss these issues in further detail and we look forward to the ORSSAB annual planning meeting. If you have any questions, please contact me at (865) 250-9705, or our TDEC-Division of Remediation office at (865) 481-0995.

Sincerely



Kristof W. Czartoryski

TDEC ORSSAB Liaison

ec: John A. Mullis II, DOE
Laura O. Wilkerson, DOE
Mike Koentop, DOE
Melyssa Noe, DOE
Roger Petrie, DOE
Samantha Urquhart-Foster, EPA
Chris Thompson, TDEC
Terry Frank, ORRCA



FY 2023 Incoming Correspondence

#	Date	To	From	Description	DOEIC, Notified board officers of receipt
210	6/9/2023	Urquhart-Foster, EPA & Young, TDEC	Henry & Petrie, DOE	Submittal of The Addendum to The Remedial Design Report for The Disposal of Oak Ridge Reservation Comprehensive Environmental Response, Compensation, And Liability Act Of 1980 Waste, Oak Ridge, Tennessee Work Plan for Groundwater Monitoring Wells West of EMWMF (DOE/OR/01-1873&D4/A2/R1)	DOEIC, Notified board officers of receipt
211	6/9/2023	Petrie, DOE	Young, TDEC	Department of Energy Oak Ridge Environmental Management Fiscal Year 2025 Budget Request	DOEIC, Notified board officers of receipt
212	6/16/2023	Petrie, DOE	Young, TDEC	Transmittal of the Response to Comments on the Addendum to the Removal Action Work Plan for the Y-12 Facilities Deactivation/Demolition Project, Oak Ridge, Tennessee: Alpha-2 Complex Demolition (DOE/OR/01-2479&D1/A13/R2)	DOEIC, Notified board officers of receipt
213	6/20/2023	Petrie, DOE	Urquhart-Foster, EPA	EPA Approval of Lower Watts Bar Reservoir and Clinch River-Poplar Creek Watershed Remedial Action Report Comprehensive Monitoring Plan, Oak Ridge, Tennessee DOE-OR-01-1820-D3	DOEIC, Notified board officers of receipt
214	6/21/2023	Petrie, DOE	Young, TDEC	TDEC Approval Letter for Phased Construction Completion Report for Demolition of Building 9213 and Ancillary Facilities 9409-36, 9703-14, and 9999-2, Oak Ridge, Tennessee (DOE/OR/01-2945&D1)	DOEIC, Notified board officers of receipt
215	6/23/2023	Petrie, DOE	Young, TDEC	TDEC Comments: Remedial Design Work Plan/Remedial Action Work Plan for the Groundwater Field Demonstration at the Environmental Management Disposal Facility, Oak Ridge, Tennessee (DOE/OR/01-2948&D1)	DOEIC, Notified board officers of receipt



FY 2023 Incoming Correspondence

#	Date	To	From	Description	DOEIC, Notified board officers of receipt
216	6/26/2023	Petrie, DOE	Urquhart-Foster, EPA & Young, TDEC	Covenant Deferral Request (CDR)s for the Black Oak Ridge Conservation Easement (BORCE) parcel and ETTP Zone 2 Exposure Units Z2-14, and portions of Z2-22, Z2-23 and Z2-24	DOEIC, Notified board officers of receipt
217	6/29/2023	Petrie, DOE	Froede, EPA	EPA Comments: RDWP/RAWP for the Groundwater Field Demonstration at the Environmental Management Disposal Facility, Oak Ridge, Tennessee (DOE/OR/01-2948&D1)	DOEIC, Notified board officers of receipt
218	7/5/2023	Petrie, DOE	Andrews, EPA	EPA comments on the Phased Construction Completion Report for Demolition of Building 9213 and Ancillary Facilities 9409-36,9703-14, and 9999-2, Oak Ridge, Tennessee (DOE-OR-01-2945&D1)	DOEIC, Notified board officers of receipt
219	7/6/2023	Petrie, DOE	Froede, EPA	EPA Comments: Addendum to the Remedial Design Report for the Disposal of Oak Ridge Reservation Comprehensive Environmental Response, Compensation, and Liability Act of 1980 Waste, Oak Ridge, Tennessee -- Work Plan for Groundwater Monitoring Wells West of EMWMF (DOE/OR/01-1873&D4/A2/R1)	DOEIC, Notified board officers of receipt
220	7/6/2023	Petrie, DOE	Young, TDEC	TDEC Comments: Addendum 15 to the Remedial Design Report/Remedial Action Work Plan for Zone 2 Soils, Slabs, and Subsurface Structures at East Tennessee Technology Park, Oak Ridge, Tennessee: Water Management in Exposure Unit Z2-13 (DOE/OR/01-2224&DS/A15/R1) (Z2-13 RDR/RAWP for Water Management)	DOEIC, Notified board officers of receipt



FY 2023 Incoming Correspondence

#	Date	To	From	Description	DOEIC, Notified board officers of receipt
221	7/6/2023	Petrie, DOE	Young, TDEC	TDEC Feedback to DOE Responses: Addendum to the Remedial Design Report for the Disposal of Oak Ridge Reservation Comprehensive Environmental Response, Compensation, and Liability Act of 1980 Waste, Oak Ridge, Tennessee (DOE/OR/01-1873&D4/A2/R1)	DOEIC, Notified board officers of receipt
222	7/11/2023	Petrie, DOE	Young, TDEC	TDEC Comments: Fiscal Year 2023 Phased Construction Completion Report for the Oak Ridge Reservation Environmental Management Waste Management Facility (DOE/OR/01-2941&D1)	DOEIC, Notified board officers of receipt
223	7/14/2023	Petrie, DOE	Young, TDEC	Re: TDEC Approval Letter for the Addendum to the Zone 1 Groundwater Plumes Remedial Investigation Work Plan for the K720 Fly Ash Pile East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2903&D2/A1)	DOEIC, Notified board officers of receipt
224	7/19/2023	Cooke, DOE	Jones, EPA	EPA Comments: Draft Covenant Deferral Request for the Proposed Title Transfer of Exposure Units Z2-14 and Z2-23 at the East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2955)	DOEIC, Notified board officers of receipt
225	7/19/2023	Petrie, DOE	Urquhart-Foster, EPA	EPA Comments: 2023 Remediation Effectiveness Report for the U.S. Department of Energy Oak Ridge Site Oak Ridge, Tennessee: Data and Evaluations (DOE/OR/01-2938&D1) (2023 RER D1)	DOEIC, Notified board officers of receipt



FY 2023 Incoming Correspondence

#	Date	To	From	Description	DOEIC, Notified board officers of receipt
226	7/20/2023	Petrie, DOE	Urquhart-Foster, EPA	EPA Comments: Addendum 15 to the Remedial Design Report/Remedial Action Work Plan for Zone 2 Soils, Slabs, and Subsurface Structures at East Tennessee Technology Park Oak Ridge, Tennessee: Water Management in Exposure Unit Z2-13 (DOE/OR/01-2224&D5/A15/R1)	DOEIC, Notified board officers of receipt
227	7/20/2023	Urquhart-Foster, EPA & Young, TDEC	Hardin & Petrie, DOE	Transmittal of the Record of Decision for Groundwater in the K-31/K-33 Area at the East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2950&D1)	DOEIC, Notified board officers of receipt
228	7/24/2023	Petrie, DOE	Young, TDEC	TDEC Comments Transmittal of the Phased Construction Completion Report for Remaining Pre-Demolition Activities and Demolition of the 3010 Reactor Complex at the Oak Ridge National Laboratory, Oak Ridge. Tennessee (DOE/OR/01-2944&D1)	DOEIC, Notified board officers of receipt
229	7/24/2023	Urquhart-Foster, EPA & Young, TDEC	Hardin & Petrie, DOE	Transmittal of the Interim Record of Decision for Groundwater in the Main Plant Area at ETPP (DOE/OR/01-2949&D1)	DOEIC, Notified board officers of receipt
230	7/21/2023	Shields, ORSSAB	Mullis, DOE	FY 2024 Topics for the Oak Ridge Site Specific Advisory Board	DOEIC, Notified board officers of receipt
231	7/31/2023	Urquhart-Foster, EPA	Petrie, DOE	U.S. DOE Response to EPA Letter on Covenant Deferral Request Milestones	DOEIC, Notified board officers of receipt
232	7/31/2023	Urquhart-Foster, EPA & Young, TDEC	Hardin & Petrie, DOE	Transmittal of the 2023 CERCLA 5-Year Review for the ETPP Watershed and the Clinch River/Poplar Creek and Lower Watts Bar Reservoir Operable Units on the DOE OR Site (DOE/OR/01-2947&D1)	DOEIC, Notified board officers of receipt

Travel Opportunities

Meeting/Event	Dates	Location	Cost	Additional Info
FY 2023				
RadWaste Summit Requests: Shields, Bartholomew	June 6-8	Las Vegas, NV	\$1,075	http://www.radwastesummit.com/
EPA National Brownfields Conference Requests: Michaels	Aug. 8-11	Detroit, MI	TBD	https://brownfields2023.org/
ORSSAB Annual Meeting <i>All members invited to attend</i>	Aug. 9	Oak Ridge	NA	
DOE National Cleanup Workshop Requests: Jones, Anzelotti, Butler, Dill	Sept. 11-13	Alexandria, VA	\$1,075	www.cleanupworkshop.com
2023 Fall Chairs Meeting Requests: NA, all invited to attend	Oct. 3-5	Oak Ridge	NA	DoubleTree Hotel
FY 2024				
Waste Management Symposium Requests: Bartholomew	March 10-14	Phoenix, AZ	TBD	www.wmsym.org
National Environmental Justice Conference & Training Requests:	April 16-18	Washington, D.C.	NA	http://thenejc.org
2024 Spring Chairs Meeting <i>Board officers preferred</i> Requests:	TBD	Las Vegas, Nevada	NA	
DOE National Cleanup Workshop Requests: Anzelotti, Dill (from '23)	TBD	Alexandria, VA	\$1,075	www.cleanupworkshop.com
2024 Fall Chairs Meeting <i>Board officers preferred</i> Requests:	TBD	Hanford, WA	NA	DoubleTree Hotel

Oak Ridge Site Specific Advisory Board

Officer Elections

Potential Slate of Candidates

Officer elections were announced at the June 2023 meeting. Staff also communicated by email to solicit interest in running for board officer positions.

The following candidates expressed interest in sitting on the Executive Committee for this upcoming year. The following list of candidates is submitted for information purposes. Elections will be held at the November ORSSAB meeting and nominations may be made from the floor at that time.

- Chair:
Amy Jones – Amy is currently vice chair and has been a member of the board since 2019.
- Vice Chair:
Kris Bartholomew – Kris has been a member of the board since 2022.
- Secretary:
Harriett McCurdy – Harriett is currently co-chair of the EM & Stewardship committee and has been a member of the board since 2019

As a reminder to all, the following are the rules for the election of Executive Committee officers:

A quorum must be present throughout the meeting.

Chair (or designee): Nominations have been presented for (name) as chair; (name) as vice chair; and (name) as secretary. Are there any further nominations for (chair, then other positions in turn)?

- Any member of the board can put themselves forward for an office at the meeting when nominations from the floor are requested.
- A member can nominate another board member during the meeting **if they have that person's consent.**

The co-chairs of the EM Stewardship Committee are also members of the Executive Committee. Elections for those positions will take place at the November EM Stewardship meeting.

- Harriett McCurdy is currently a co-chair.
- The second seat is vacant following a resignation.
- Chair:
Mary Butler
- Vice Chair:
Harold Connor

Suggested FY 2024 Oak Ridge Site Specific Advisory Board Topics

by Luther Gibson

Interdependency of Department of Energy Sites

There has been a historical interdependency of Department of Energy sites for waste management and disposal and relocation of stored materials. The Toxic Substances Control Act Incinerator in Oak Ridge accepted PCB-contaminated, hazardous, radioactive waste from throughout the DOE Complex. Oak Ridge has sent depleted uranium hexafluoride to Portsmouth for conversion, spent nuclear fuel to Idaho for storage, mixed waste to Nevada for burial, and transuranic waste to Carlsbad for deep emplacement, as examples. Other DOE sites continue to ship waste for treatment to commercial facilities in our community with the impact on our local environment analyzed as insignificant as long as these facilities comply with permits. At times, regulators and other stakeholders have taken positions that impeded cooperation or shown hesitance to utilize on-site capacity for their own wastes. The study of this issue would include an update to understand the current situation and to engage in more informed discussion with stakeholders in other DOE communities as occurs at EM SSAB Chairs meetings.

Natural Resource Damage Assessment Process

In December 2022, a Restoration and Compensation Determination Plan/Environmental Assessment was issued for the second phase of the Oak Ridge Reservation Natural Resource Damage Assessment. Although there was public involvement in the process, there are indications that the process is not well understood, particularly how exactly the funds associated with the damage assessment will be spent. Specific projects could have very localized economic impact when implemented. The study of this issue would include continued engagement of stakeholders as the potential projects in the assessment are clarified and implemented.

Mercury

DOE Environmental Management is seeking a Contractor to establish a DOE capability for the long-term management and storage of domestic elemental mercury waste to meet the requirements of laws that have been passed. Siting of this storage capability raises stakeholder concerns. The study of this issue would include understanding the scope of mercury storage, recovery, and use in context with the management of mercury by other DOE Program Secretarial Offices and Defense stockpile organizations. For example, mercury is used in targets at the Spallation Neutron Source and has been stored in large quantities at Y-12 Building 9720-26.

Emergency Management

A case could be made that the Department of Energy in Oak Ridge should maintain the highest level of public awareness of what to do in case of an emergency at any of its facilities that would require the

public to take protective actions. Despite a formal chain to report the event and recommend appropriate pre-planned protective actions to local authorities, information is disseminated in other ways and causes reactions. With the removal of DOE hazardous materials from the East Tennessee Technology Park, an accident requiring the public to take protective action for a DOE event at ETPP is no longer credible, and the Emergency Planning Zones for the Oak Ridge Reservation have been reduced. Some printed information in the public domain has not been updated. OREM facilities at Y-12 and ORNL may still have potential for classifiable operational emergencies. The study of this issue would involve OREM jointly sponsoring a public forum along with the other DOE Program Secretarial offices to update the public with information and demonstrate their capability to handle emergencies affecting the public. OREM could also update the ORSSAB on hazardous material inventories that it is currently managing in its buildings and facilities and reduction efforts.

Annual Site Environmental Report (ASER)

The ASER is prepared for DOE according to the requirements of DOE Order 231.1B, Environment, Safety, and Health Reporting. The ASER includes data on the environmental performance of each of the major DOE ORR contractors and describes significant accomplishments in pollution prevention and sustainability programs that reduce many types of waste and pollutant releases to the environment. DOE has published an annual environmental report with consolidated data on overall ORR performance and status since the mid-1970s. The ASER is a key component of DOE's effort to keep the public informed about environmental conditions across DOE and National Nuclear Security Administration sites. Although OREM is responsible for only a portion of the activity reported, the report provides context for its activities alongside ongoing operations. The study of this issue would involve OREM or the ORSSAB jointly sponsoring a public presentation associated with release of the ASER.

Implementation of Long-Term Stewardship

The Public Involvement Plan for CERCLA Activities at the U.S. Department of Energy Oak Ridge Site states: "Today, the ORSSAB EM/Stewardship Committee continues to work on crucial long-term stewardship issues. Major areas of focus include integration of long-term stewardship with remediation decisions, application of the Long-Term Stewardship Strategic Plan, and the development of a Long-Term Stewardship Implementation Plan. The committee also serves informally as a Citizens Board for Stewardship and will continue to do so until the ORSSAB completes its mission and is disbanded. At that time, it is anticipated that a formal Citizens Board for Stewardship will be constituted." The study of this issue will involve awareness of the annual Remediation Effectiveness Report and participation to the extent practical in understanding and verifying the maintenance of institutional controls. Many of the early stakeholders that envisioned long-term stewardship are no longer with us or able to follow up on their recommendations. The concept of a Citizens Board for Stewardship is somewhat nebulous as such has not implemented, at least formally, at sites where local SSABs have been disbanded due to completion of EM's work. The Office of Legacy Management also has not had any Federal Advisory Committee Act chartered boards.

Impact of Remediation on End-State Development of ETPP and Vice Versa

Parcels of land at East Tennessee Technology Park have become owned by entities other than the Department of Energy. A general aviation airport is also planned to be constructed at the site. A remedy for remediation of surface ponds was changed to accommodate potential construction of the airport. OREM will have to coordinate remediation and monitoring with entities that own the parcels of land. The study of this issue will involve timely updates on status, negotiations, and decisions, as well as clear identification of actions by DOE that would not have been done in absence of planning for the airport.

Terminal Management of Surplus and Recyclable Materials

The Department of Energy has been responsible for bulk and scrap materials such as steel, aluminum, and nickel, and items containing sodium and other materials used in reactor shielding. The materials may be surface or volumetrically contaminated or contain activation products. Statutory, regulatory, and DOE Secretarial policy considerations constrain or have prevented final disposition. There are instances where initiatives to disposition materials were not concluded, and the materials ended up in indefinite storage elsewhere. Of late, there has been renewed interest in addressing surface contaminated recyclable nickel. The study of this issue would involve a status update.

About the Author

Luther Gibson served on the Oak Ridge Site Specific Advisory Board and Executive Committee from 1999-2005. He served as ORSSAB Chair in FY 2001 and 2002, during which 36 recommendations and comments were delivered to agency officials. During his tenure on ORSSAB, Luther also served on an Environmental Management Advisory Board Alternative Technologies to Incineration Committee. He authored a report that the DOE Assistant Secretary for Environmental Management directed local EM managers to consider in making technology selection decisions.

Luther retired from Consolidated Nuclear Security Y-12 in 2017 after a 40-year career with Department of Energy Oak Ridge prime contractors at Paducah Gaseous Diffusion Plant, K-25, and Y-12. He holds B.S. and M.S. degrees in Chemical Engineering from the University of Kentucky. He worked in the areas of environmental technology development, operations research, environmental compliance, nuclear facility safety, and emergency management technical basis.

Luther is a member of the American Institute of Chemical Engineers and the Air & Waste Management Association.

Luther is currently a Vice-President of the Coalition of Oak Ridge Retired Employees. He is Chair of the Planning Committee and of the Pension Fund Analysis Committee. He is also a member of the Other DOE Sites Committee and Contractor Contact Team with Consolidated Nuclear Security.

Abbreviations/Acronyms List for Environmental Management Projects

AM – action memorandum
ACM – asbestos containing material
ARARs – Applicable or Relevant and Appropriate Requirements
ARRA – American Recovery and Reinvestment Act
BCV – Bear Creek Valley
BG – burial grounds
BV - Bethel Valley
CARAR – Capacity Assurance Remedial Action Report
CART - carbon steel casing dollies
CBFO – Carlsbad Field Office
CERCLA – Comprehensive Environmental Response, Compensation
and Liability Act
CD – critical decision
CH – contact handled
CNF – Central Neutralization Facility
COLEX – column exchange
CS – construction start
CY – calendar year
D&D – decontamination and decommissioning
DARA – Disposal Area Remedial Action
DDFO – Deputy Designated Federal Officer
DNAPL – Dense Non-Aqueous Phase Liquids
DOE – Department of Energy
DSA – documented safety analysis
DQO – data quality objective
EE/CA – engineering evaluation/cost analysis
EFPC – East Fork Poplar Creek
EM – environmental management
EMDF – Environmental Management Disposal Facility
EMWMF – Environmental Management Waste Management Facility
EPA – Environmental Protection Agency
EQAB – Environmental Quality Advisory Board
ETTP – East Tennessee Technology Park
EU – exposure unit
EV – earned value
FACA – Federal Advisory Committee Act
FCAP - Facilities Capability Assurance Program
FFA – Federal Facility Agreement
FFS – Focused Feasibility Study
FPD – federal project director
FY – fiscal year
GIS – geographical information system

GW – groundwater
GWTS – groundwater treatability study
HQ – Headquarters
HRE – Homogenous Reactor Experiment
IROD – Interim Record of Decision
ISD - In-Situ Decommissioning
LEFPC – Lower East Fork Poplar Creek
LGWO – Liquid and Gaseous Waste Operations
LLW – low-level waste
MLLW – mixed low-level waste
MSRE – Molten Salt Reactor Experiment
MTF – Mercury Treatment Facility
MV – Melton Valley
NaF – sodium fluoride
NDA – non-destructive assay
NEPA – National Environmental Policy Act
NNSS – Nevada National Security Site (new name of Nevada Test Site, formerly NTS)
NPDES – National Pollutant Discharge Elimination System
NPL – National Priorities List
OR – Oak Ridge
ORGDP – Oak Ridge Gaseous Diffusion Plant
OREIS – Oak Ridge Environmental Information System
OREM – Oak Ridge Office of Environmental Management
ORNL – Oak Ridge National Laboratory
ORO – Oak Ridge Office
OROP - Oak Ridge Oxide Processing
ORR – Oak Ridge Reservation
ORRR – Oak Ridge Research Reactor
ORRS – operational readiness reviews
PaR – trade name of remote manipulator at the Transuranic Waste Processing Center
PCB - polychlorinated biphenyls
PCCR – Phased Construction Completion Report
PM – project manager
PP – Proposed Plan
PPE – Personal Protective Equipment
QAPP – Quality Assurance Project Plan
RA – remedial action
RAR – Remedial Action Report
RAWP – Remedial Action Work Plan
RCRA – Resource Conservation Recovery Act
RDR – Remedial Design Report
RDWP – Remedial Design Work Plan
RER – Remediation Effectiveness Report

RFI – Request for Information
RGRS – Reactive Gas Removal System
RH – remote handled
RI/FS – Remedial Investigation/Feasibility Study
RIWP – Remedial Investigation Work Plan
RmAR – Removal Action Report
RmAWP – Removal Action Work Plan
ROD – Record of Decision
RSE – Remedial Site Evaluation
RUBB – trade name of a temporary, fabric covered enclosure
S&M – surveillance and maintenance
SAP – sampling analysis plan
SEC – Safety and Ecology Corp.
SEP – supplemental environmental project
STP – site treatment plan
SW – surface water
SWSA – solid waste storage area
Tc – technetium
TC – time critical
TDEC – Tennessee Department of Environment and Conservation
TRU – transuranic, an artificially made, radioactive element that has an atomic number higher than uranium in the periodic table
TSCA – Toxic Substances Control Act
TWPC – Transuranic Waste Processing Center
U – uranium
UEFPC – Upper East Fork Poplar Creek
UPF – Uranium Processing Facility
URS/CH2M – (UCOR) DOE’s prime cleanup contractor
VOC – volatile organic compound
VPP – Voluntary Protection Plan
WAC – waste acceptance criteria
WEMA – West End Mercury Area (at Y-12)
WHP – Waste Handling Plan
WIPP – Waste Isolation Pilot Plant
WRRP – Water Resources Restoration Program
WWSY – White Wing Scrap Yard
Y-12 – Y-12 National Security Complex
ZPR – Zero Power Reactor