

Oak Ridge Site Specific Advisory Board Monthly Meeting



Wednesday, March 13, 2024, 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.



Oak Ridge Site Specific Advisory Board
Wednesday, March 13, 2024, 6:00 p.m.
Hybrid meeting
AGENDA

- I. Welcome and announcements (A. Jones) 6:00–6:05
 - II. Comments from federal and state agency representatives
(M. Noe, R. Petrie, S. Urquhart-Foster, K. Czartoryski)..... 6:05–6:10
 - i. Introduction of new board members (M. Noe)
 - III. Presentation: FY 2026 Budget Prioritization/Input (K. Thompson) 6:10–6:30
Issue Group: *Butler, Conner, Dill, Jones, McCurdy, Tuck*
– Members, please inform staff if you wish to join this or any other topic on the Work Plan.
Questions regarding the **presentation/speaker only**..... 6:30–6:40
 - ii. Board members
 - iii. Guests – Indicate you wish to speak by standing. Online: use the “raise hand” action in Zoom and wait to be acknowledged. Or type your question in the chat.
 - IV. Public comment period (S. Kimel)..... 6:40-6:50
 - i. Comments on **other topics or concerns** for DOE or the board – Comments previously received to be read into the record.
 - ii. *Comments pertaining to this meeting will continue to be accepted by email to orssab@orem.doe.gov by no later than 5 p.m. EST on Monday, March 18, 2024.*
 - V. Call for additions & motion to approve agenda (A. Jones)..... 6:50
 - A. Requests for new action items
 - B. Next meeting – 6 p.m. April 10 to discuss Aquatic Ecology Research and Technology Development in East Fork Poplar Creek
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- This ends the presentation portion of the meeting – presenters and subject experts may depart*
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- VI. Board Business (A. Jones) 7:00–7:10
 - A. Vote to Approve Previous Meeting Minutes
 - a. Minutes of February 14, 2024
 - VII. Responses to recommendations & DDFO’s report (M. Noe) 7:10–7:15
 - VIII. Committee reports 7:15–7:20
 - A. EM/Stewardship (M. Butler)
 - B. Next meeting – March 27 continued discussion on FY 2026 Budget Prioritization/Input
 - i. *Recommendation requested. Issue group chooses a leader and begins to draft document based on input from this meeting. Additional members may join group on request.*
 - IX. Additions to agenda & closing remarks (A. Jones)..... 7:20–7:30
 - X. Adjourn 7:30

5/21/18

Karen Thompson, DOE

Presenter Bio

Karen Thompson is the Branch Chief for the Planning and Baseline Management Branch for the Oak Ridge Office of Environmental Management. In this capacity, she supports the Division Director and Associate Director of the Planning and Execution Division and the integrated project teams in strategic planning, budget development, and performance tracking and reporting.

Previously to her selection in November 2014, she was the Project Control Lead for the East Tennessee Technology Park work scope. She has also served as the K-25 Historic Preservation Coordinator between July 2012 and June 2015.



Oak Ridge Site Specific Advisory Board

March

2024

Topic: FY 2026 Budget Development/prioritization input

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5	6 Executive Committee meeting – 4 p.m. (virtual)	7	8	9
10	11	12	13 Full Board Meeting – 6 p.m. (hybrid)	14	15	16
17	18	19	20	21	22	23
24	25	26	27 EM & Stewardship Committee meeting – 6 p.m. (hybrid)	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



Oak Ridge Site Specific Advisory Board

April (draft)

2024

Topic: Aquatic Ecology Research and Technology Development in East Fork Poplar Creek

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3 Executive Committee meeting – 4 p.m. (virtual)	4	5	6
7	8	9	10 Full Board Meeting – 6 p.m. (hybrid)	11	12	13
14	15	16	17	18	19	20
21	22	23	24 EM & Stewardship Committee meeting – 6 p.m. (hybrid)	25	26	27
28	29	30				

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

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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 February 14, 2024 Meeting Minutes

The Oak Ridge Site Specific Advisory Board (ORSSAB) held its full board monthly meeting virtually via Zoom and in person at 1 Science.gov Way on Wednesday, February 14, 2024 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
Rosario Gonzalez
Amy Jones

Noah Keebler
Harriett McCurdy
Christine Michaels
Charles Moore
Tonya Shannon
Michael Sharpe

Members Absent

Atilio Anzellotti
Candace Atkinson
Raiyan Bhuiyan
Mike Mark

Thomas McCormick
Rachel Stewart
Tom Tuck

¹Third consecutive absence

Liaisons, Deputy Designated Federal Officer, and Alternates Present

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

Others Present

Leah Alexander, OREM
Brian Begley, EPA
Emily Day, UCOR
Sierra Generette, UCOR
Shelley Kimel, ORSSAB Staff

Sara McManamy-Johnson, ORSSAB Staff
Jamie Meuwissen, DOE
Abby Newberry, OREM
John Sayer, EPA

One member of the public was present.

Liaison Comments

Ms. Noe – Ms. Noe introduced new board member Charles Moore and noted she would be introducing additional new members next month. Next, Ms. Noe introduced OREM’s new deputy manager Erik Olds.

Mr. Olds – Mr. Olds told members that Laura Wilkerson will serve as Oak Ridge’s chief engineer or Environmental Management (EM). Next, he gave members an overview of recent OREM activities and accomplishments. He said DOE headquarters (HQ) recently released its annual list of priorities for the EM complex for 2024 and Oak Ridge had three items on the list. The first item is processing 35 canisters of uranium 233 (U-233) as part of the U-233 disposition project, a high priority at HQ. The second item is completing soil remediation at East Tennessee Technology Park (ETTP), which wraps up a major chapter of cleanup and allows focus to shift to groundwater. The third item is beginning demolition of the Alpha-2 facility at Y-12 National Security Complex (Y-12), which marks EM’s first demolition of a former enrichment facility at Y-12. Additionally, Mr. Olds said Isotek is in the second phase of their processing activity there, and they're getting into the material that actually has higher radiological doses.

Next, Mr. Olds said DOE recently partnered with a private company called Zeno Power in a partnership that also involved the Department of Defense. Through this partnership, Zeno is taking radiological material to create power sources for specific environments, including space and deep-sea applications. Through that partnership, DOE was able to transfer an old radioisotope thermoelectric generator (RTG) as opposed to storing it onsite.

Mr. Olds then told members OREM recently completed transfer of the 365-acre parcel known as the former powerhouse area, marking the largest land transfer to date at ETTP.

Mr. Petrie – Mr. Petrie said the RTG transferred to Zeno Power represented a significant inventory of radioactive material that is no longer in Oak Ridge, and it illustrates the benefits of such partnerships. Ms. McCurdy asked how Zeno Power knew the RTG was there and unwanted. Mr. Petrie said three individuals from the company noticed it during a tour in Oak Ridge and identified a way to repurpose it.

Mr. Czartoryski – No comments.

Ms. Urquhart-Foster – Staff read chat comments submitted by Ms. Urquhart-Foster, who said EPA is pleased with the major accomplishments at the Oak Ridge Reservation and is looking forward to celebrating the completion of soil remediation at ETTP in the near future. She said EPA Region Four is in the process of submitting the DOE Oak Ridge Reservation’s ETTP for a national EPA award for Clean Energy Reuse, Climate Change Adaptation, and Building Environmental Infrastructure, a Green

Economy and Green Jobs.

Presentation

Mr. Bartholomew introduced OREM's Dennis Mayton to present the topic of discussion, Ongoing Efforts to Assure Waste Disposal Capacity.

Mr. Mayton began his presentation by giving members an overview of OREM's current waste disposal facilities, which includes several engineered landfills for disposal of Oak Ridge remediation, demolition, and sanitary waste. He then described DOE's decision-making process for how to dispose of waste and demolition debris for sustainability purposes, which begins by first trying to recycle or reuse materials instead of disposing. If materials cannot be recycled or reused, DOE will determine if they can be disposed of in sanitary waste Oak Ridge landfills, which includes Landfill IV for classified waste, Landfill V for sanitary materials, and Landfill VII for construction/demolition debris. If materials do not meet the criteria for acceptance at one of the sanitary waste landfills, DOE will determine if it meets the criteria for acceptance at Oak Ridge's CERCLA waste facility, the Environmental Management Waste Management Facility (EMWMF), which is used for low-level radiological- and/or chemical-contaminated soil and demolition debris and equipment. He said that facility is about 85 percent full. The Environmental Management Disposal Facility (EMDF) currently under construction will also be a CERCLA waste facility. Waste that does not meet the acceptance criteria for any of the Oak Ridge disposal facilities will be shipped offsite.

Mr. Mayton said the majority of the material, by volume, stays onsite because most of it is material such as concrete, steel, and soil. Less than 10 percent of the material is shipped offsite, and that material represents material with high radiological activity.

Next, Mr. Mayton gave members an overview of the locations for Oak Ridge's onsite disposal facilities. He said OREM uses haul roads, gravel roads between facilities, to keep waste off public highways to reduce risk.

He then discussed the role of onsite disposal in the cleanup efforts. He said onsite disposal availability has been key to the successful cleanup of ETTP, which has opened new opportunities for private industries to move in there.

Mr. Mayton then went into additional detail about EMWMF. He said the approximate total capacity of 2.3 million cubic yards is currently about 85 percent full and is projected to be full in the late 2020s. He said additional waste disposal capacity to be provided by EMDF and by expansions to Oak Ridge's permitted landfills will be needed to allow OREM to continue cleanup efforts at the Oak Ridge National Laboratory (ORNL) and Y-12, which contain more than 200 buildings to be demolished between the two sites.

Next, he described the systems approach to waste disposal that's used to provide multiple layers of protection. This approach includes site selection and characterization, design and construction, site operations, and performance assurance. He then discussed the steps remaining before construction can be completed on EMDF and waste disposal at the facility begins. Lastly, he described OREM's public outreach efforts.

Board members asked the following questions:

- Ms. Butler said she recalled there were going to be four disposal cells in EMDF, but only two would be done at first. She asked if the other two would be held in reserve for future needs or would be needed for current needs.
 - Mr. Mayton said the total capacity would be about 2.2 million cubic yards, and those two cells are included in that total capacity. Of that total capacity, about 25 percent is built in as a contingency if the space is needed in the future.
- Mr. Bartholomew asked if everything for EMDF is contingent on the groundwater model for the site.
 - Mr. Mayton said as an example that if the groundwater model showed the water level was a couple feet higher than expected, the design would change to raise the base of the landfill to maintain 15 feet of separation from the waste, so it wouldn't mean starting over, just redesigning. Mr. Petrie said in that scenario, one challenge would be that raising the base would use a portion of the volume included in the 25 percent contingency discussed earlier. Mr. Mayton said in the majority of the area where the facility will be located, the groundwater levels are already at or below that level.
- Mr. Conner asked how the funding cycle looks for the remainder of the decade.
 - Mr. Mayton said current funding levels support completing EMDF between 2029 and 2030. He said everything is conditional on funding, so if that changed it could impact the schedule. He said there is good support for this project.
- Staff read a question submitted from Mr. Sharpe. He asked if the water level test is to be complete this November and run for two years, would it slow the timeline.
 - Mr. Mayton said, no, that is built into the schedule. He said the monitoring system would be put in place in November and then monitor through two wet seasons, which is considered from December through April. The construction date takes into consideration monitoring through April 2026.
- Ms. Butler said she recalled funds for this project are set aside, so DOE won't need to go back for more, and she asked if that was correct.
 - Mr. Petrie said EMDF and Outfall 200 are capital projects with capital line items in the annual budget requests. Capital line items are funds earmarked specifically for that item. He said EMDF has had tremendous support from headquarters and from Congress as they realize it is needed for the cleanup work.

Questions from the Public

- Mr. Luther Gibson asked if DOE must file special waste permits on some of the lots sent to Landfills IV, V, and VII. Mr. Petrie said yes. Mr. Gibson asked to confirm waste disposal capacity amounts of a total of about 4.5 million cubic yards, which Mr. Petrie said was correct and of that amount almost 2 million cubic yards has already been used, and a CERCLA waste baseline of about 3.6 or 3.7 million cubic yards, which Mr. Petrie confirmed was the current estimate.

Public Comment

- Public Comment #1 – Mr. Luther Gibson said the topic of ongoing efforts to assure waste disposal capacity should also address access to offsite waste facilities, as well as develop appropriate technologies and disposal options for difficult to dispose of waste. He cited developments regarding hazardous waste permits in New Mexico for the Waste Isolation Pilot Plant (WIPP) and their plans for accepting legacy waste at that facility.

Board Business/Motions

- Ms. Jones asked for a motion to approve the agenda.
 - 2.14.24.1 Motion made by Ms. Gonzalez and seconded by Ms. Michaels. Motion passed.
- Ms. Jones asked for a motion to approve meeting minutes.
 - 2.14.24.2 Motion to approve the November 8, 2023, meeting minutes. Motion made by Ms. Butler and seconded by Ms. Michaels. Motion passed.

Responses to Recommendations & Alternate DDFO Report

Ms. Noe said there were no open recommendations. She added that the next EM Chairs meeting is being planned for Portsmouth for Tuesday through Thursday of the first week in May, and members interested in attending should let staff know to set up travel.

Committee Reports

Executive – None.

EM & Stewardship – Ms. Butler said there are no outstanding action items, and the committee's next meeting is scheduled for February 28 to continue discussion on Ongoing Efforts to Assure Waste Disposal Capacity. She asked the topic's issue group members to try to attend the upcoming meeting if at all possible, and she said her understanding is there is no recommendation requested for the topic.

Additions to the Agenda & Open Discussion

Ms. Jones reminded members to bring appropriate identification for the upcoming waste disposal tour.

Action Items

None

The meeting adjourned at 6:50 p.m.

I certify that these minutes are an accurate account of the February 14, 2024 meeting of the Oak Ridge Site Specific Advisory Board.

Amy Jones, Chair

Harriett McCurdy, Secretary

March 13, 2024

Oak Ridge Site Specific Advisory Board

AJ/sbm



FY 2024 Incoming Correspondence

#	Date	To	From	Description	DOEIC, Notified board officers of receipt
76	2/7/2024	Petrie, DOE	Young, TDEC	TDEC Comments Re: Addition of Facilities to the Action Memorandum for the Y-12 Facilities Non-TimeCritical Removal Action Deactivation/Demolition Project, Oak Ridge, Tennessee (DOE/OR/01-2462&D2)	DOEIC, Notified board officers of receipt
77	2/7/2024	Urquhart-Foster, EPA; Young, TDEC	Henry, Petrie, DOE	Federal Facility Agreement Milestone Extension Request for the Y-12 National Security Complex North Tributary-8 Engineering Evaluation-Cost Analysis and Related Documents.	DOEIC, Notified board officers of receipt
78	2/8/2024	Petrie, DOE	Urquhart-Foster, EPA	EPA approval of milestone extension request for Y-12 PCCR D2 (DOE/OR/01-2929&D2)	DOEIC, Notified board officers of receipt
79	2/9/2024	Petrie, DOE	Young, TDEC	TDEC Comment: Explanation of Significant Differences for the Record of Decision for the Disposal of Oak Ridge Reservation Comprehensive Environmental Response, Compensation, and Liability Act of 1980 Waste, Oak Ridge, Tennessee: Haul Road Reroute (DOE/OR/01-2973&D1)	DOEIC, Notified board officers of receipt
80	2/9/2024	Petrie, DOE	Dawson, EPA	EPA Approval: Addendum to the Remedial Action Work Plan/Waste Handling Plan for Liquid and Gaseous Waste Operations at the Oak Ridge National Laboratory	DOEIC, Notified board officers of receipt
81	2/9/2024	Urquhart-Foster, EPA; Young, TDEC	Hardin, Petrie, DOE	Transmittal RE Addendum 2 (EU Z2-17) to the FY 2009 PCCR for Zone 2 EUs 11, 12, 17, 18, 29, and 38 at ETPP (DOE-OR-01-2415&D2-A2-R1)	DOEIC, Notified board officers of receipt
82	2/9/2024	Petrie, DOE	Young, TDEC	TDEC Comments RE: Transmittal of the Waste Handling Plan for the Demolition of the Alpha-2 Complex Located at the Y-12 National Security Complex, Oak Ridge, Tennessee (DOE/OR/01-2877&D1)	DOEIC, Notified board officers of receipt
83	2/9/2024	Petrie, DOE	Andrews, EPA	EPA Approval: Waste Handling Plan for the Demolition of the Alpha-2 Complex located at the Y-12 National Security Complex, Oak Ridge, Tennessee (DOE/OR/01-2877&D1)	DOEIC, Notified board officers of receipt



FY 2024 Incoming Correspondence

#	Date	To	From	Description	DOEIC, Notified board officers of receipt
84	2/14/2024	Petrie, DOE	Young, TDEC	TDEC Comments RE: Addendum 2 (Exposure Unit 22-17) to the Fiscal Year 2009 Phased Construction Completion Report for Zone 2 Exposure Units 11, 12, 17, 18, 29, and 38 at East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2415&D2/A2/R1)	DOEIC, Notified board officers of receipt
85	2/15/2024	Petrie, DOE	Young, TDEC	TDEC Comments RE: Removal Action Report for the Poplar Creek Mudflat Sediment Time-Critical Removal Action at the East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2952&02)	DOEIC, Notified board officers of receipt
86	2/16/2024	Petrie, DOE	Young, TDEC	TDEC Letter Regarding DOE's Response to Comments for Bear Creek Valley Mercury Sources Remedial Site Evaluation Sampling and Analysis Plan Oak Ridge, Tennessee (DOE/OR/01-2958&D 1)	DOEIC, Notified board officers of receipt
87	2/16/2024	Petrie, DOE	Young, TDEC	TDEC Comments Re: Federal Facility Agreement Milestone Extension Request for the Y-12 National Security Complex North Tributary-8 Engineering Evaluation/Cost Analysis (DOE/OR/01-2957&02) and Related Documents	DOEIC, Notified board officers of receipt
88	2/16/2024	Petrie, DOE	Young, TDEC	TDEC Comments RE: Transmittal of the Addendum to the Remedial Action Work Plan/Waste Handling Plan for Liquid and Gaseous Waste Operations at the Oak Ridge National Laboratory, Oak Ridge, Tennessee: Facility and Equipment Deactivation/Small-Scale Demolition (DOE/OR/01-2830&D1/A3)	DOEIC, Notified board officers of receipt
89	2/20/2024	Petrie, DOE	Urquhart-Foster, EPA	EPA Comments: Federal Facility Agreement Milestone Extension Request for the Y-12 National Security Complex North Tributary-8 Engineering Evaluation/Cost Analysis and Related Documents	DOEIC, Notified board officers of receipt



FY 2024 Incoming Correspondence

#	Date	To	From	Description	DOEIC, Notified board officers of receipt
90	2/22/2024	Petrie, DOE	Andrews, EPA	EPA Comments: Removal Action Report for the Poplar Creek Mudflat Sediment Time-Critical Removal Action at the East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2952&D2)	DOEIC, Notified board officers of receipt
91	2/27/2024	Petrie, DOE	Dawson, EPA	EPA Comments: Addendum to the Remedial Design Report/Remedial Action Work Plan for the Decontamination and Decommissioning of Non-Reactor Facilities in Bethel Valley at the Oak Ridge National Laboratory, Oak Ridge, Tennessee: Demolition Of Building 2523 And Annex 2523A dated December 2023 (DOE/OR/01-2428&D2/A14) [Buildings 2523/2523A Demolition Addendum	DOEIC, Notified board officers of receipt
92	2/28/2024	Petrie, DOE	Young, TDEC	TDEC Comments: Re: TDEC Letter for Melton Valley/Bethel Valley Exit Pathway Phase 1 Remedial Investigation Completion Report for the U.S. Department of Energy Oak Ridge Site, Oak Ridge, Tennessee (DOE/OR/01-2953&D2)	DOEIC, Notified board officers of receipt
93	3/1/2024	Petrie, DOE	Adams, EPA	EPA Comments: Addendum 2 (Exposure Unit Z2-17) to the Fiscal Year 2009 Phased Construction Completion Report for Zone 2 Exposure Units 11, 12, 17, 18, 29, and 38 at East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2415&D2/A2/R1)	DOEIC, Notified board officers of receipt
94	3/4/2024	Petrie, DOE	Dawson, EPA	EPA Comments: Bethel Valley Administrative Watershed Remedial Action Report Comprehensive Monitoring Plan (RAR-CMP) Erratum, Oak Ridge, Tennessee, dated January 2024 (DOE/OR/01-2478&D3) [FY24-BV-01 Erratum], including Appendix I-12 Erratum Flow Chart	DOEIC, Notified board officers of receipt

Travel Opportunities

Meeting/Event	Dates	Location	Cost	Additional Info
FY 2023				
EPA National Brownfields Conference Requests: Michaels	Aug. 8-11	Detroit, MI	\$200	https://brownfields2023.org/
FY 2024				
Waste Management Symposium Requests: Bartholomew, Jones, Bhuiyan	March 10-14	Phoenix, AZ	\$1,780	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: Jones, Bartholomew, Butler	April 30-May 2	Chillicothe, OH	NA	
RadWaste Summit Requests: Jones, Michaels	June 3-5	Louisville, KY	875 (March 22 reg)	https://www.exchangemonitor.com/go/radwaste-summit-2024/
DOE National Cleanup Workshop Requests: Anzeletti*, Dill*	Sept. 16-18	Arlinton, VA	\$675 (July 9 reg)	www.cleanupworkshop.com
2024 Fall Chairs Meeting <i>Board officers preferred</i> Requests: NA all invited	September 24-26	Oak Ridge	NA	

ORSSAB 2024

Member Biographies

Atilio Anzellotti is a senior scientist with PETNET Solutions and a resident of Oak Ridge. He would bring a unique perspective to the board as he has dual citizenship (US and Venezuela). His B.S. and M.S. degrees in chemistry were received in Venezuela from the University of Los Andes and the Venezuelan Institute for Scientific Research, respectively. He received a Ph.D. in chemistry from Virginia Commonwealth University. Mr. Anzellotti is active in the community and is a member of the American Chemical Society and the Oak Ridge Environmental Quality Board. He is interested in environmental and public health issues.

Candace Atkinson is the lead 911 dispatcher for the Anderson County Sheriff's Office. She earned a bachelor of science degree in Occupational Safety and Health from Eastern Kentucky University holds a variety of health-related certifications related to her career in law enforcement and emergency services, including CPR and safety communications. She also holds various certifications from the Federal Emergency Management Agency (FEMA). She is a member of the Omega Nu Lambda National Honor Society and the Southern States Police Benevolent Association. Candace is interested in environmental, civic and public health issues. She lives in Oak Ridge.

Kris Bartholomew is the owner of Turn Key Plumbing and Construction, a small family-owned business. A high school graduate with some college, Kris has received licensures related to his trade. Those licenses include general contractor and subsurface sewage installer. He is interested in environmental and public health issues. He lives in Lenoir City.

Raiyan Bhuiyan is earned a bachelor of science degree in Nuclear Energy Engineering Technology from Thomas Edison State University, where he was a recipient of the Nuclear Regulatory Commission Scholarship. He was also a graduate of the Naval Power School during his time serving in the U.S. Navy and has received certifications in CPR and as an IBM Data Science Professional. Raiyan is interested in environmental and workforce issues. He lives in Oak Ridge.

Mary Butler is a former staff pharmacist with Aurora Pharmacy. She received a bachelor of science in pharmacy from the University of Wisconsin. She retired to Rockwood in 2020 and is eager to engage in the community here as she was previously active in several organizations in her native Wisconsin. Mary is interested in civic and educational issues.

Harold Conner, Jr., is a senior engineering advisor with Strata-G. In this role, he focuses on supporting community outreach, university partnerships, student internships and mentoring. Harold is a former K-25 plant manager, serving from 1968-1996. He has bachelor of science and master of science degrees in Chemical Engineering from the University of Tennessee, Knoxville (UT), where he was the program's first African American graduate in 1968. He received his Ph.D. in Industrial and Systems Engineering from the University of Alabama at Huntsville. He is active in many community organizations including: the UT Knoxville Alumni board; the UT Tickle College of Engineering board; the STEM Scouts board; the American Museum of Science and Energy board; and Strata-G's board. He is a fellow of the American Institute of Chemical Engineers and the American Society for Engineering Management. He is also a lifetime member of the National Society of Black Engineers and the National Organization of Black

Chemists and Chemical Engineers. Harold lives in Knoxville and is interested in educational and minority issues.

Paul Dill retired in 2018 as a project manager with Project Enhancement Corp. He received a B.S. in industrial engineering/technology management from Roger Williams University and an M.A. in psychology from Ashford University. Mr. Dill also earned a Master Project Manager certification from the American Academy of Project Management. He is currently an associate member of the American Psychological Association and a member of the Society for Personality and Social Psychology. Mr. Dill lives in Oliver Springs, which includes portions of Anderson, Roane, and Morgan counties. He is interested in environmental and public health issues.

Rosario Gonzalez is a returning board member who served from 2016 through 2018. She recently retired as cafeteria manager of St. Mary's Catholic Church Cafeteria in Oak Ridge. She completed her secondary education in Mexico and received her GED from Pellissippi State. She lives in Oak Ridge and is interested in environmental and minority issues.

Amy Jones is the agency manager for Steve Pyatt Insurance and a licensed agent for Madison Insurance Group, serving as lead agent for their Georgia office and as senior benefits coordinator for their Medicare division. She is also a real estate agent at Stephenson Realty & Auction. She owned her own business, Double J Enterprises of TN, in Rocky Top, Tennessee, for more than 20 years. Amy is active in a variety of community organizations, including the Anderson County Chamber of Commerce, the Anderson County Headstart Policy Council, the Women's Ministry Banquet at Main Street Baptist, the Anderson County Republican Party, the Tennessee Republican Party, the Order of Amaranth, and the Order of the Eastern Star. She founded Christmas for Rocky Top Kids in 2018. She lives in Bricveille and is interested in environmental, economic, and county government issues.

Noah Keebler is a nuclear electronics technician with Ametek, which is a manufacturer of electronic instruments and electromechanical devices. Prior to that he was a radiological instrumentation specialist with Perma-fix Environmental Services. Mr. Keebler received an A.S. in Electrical Engineering from Roane State Community College. He holds a certification in Instrumentation from Ludlum Measurements and several other work-related certifications. Noah has Occupational Safety and Health Administration training, electrical safety experience and radiation worker training and is a member of the East Tennessee Chapter of the Health Physics Society. He has an interest in environmental issues. He lives in Knoxville.

Michael (Mike) Mark is a former first responder and hazmat professional. He earned a high school diploma and has many certifications related to his career. He lives in Harriman and is interested in environmental and economic development issues.

Thomas McCormick is the city manager for the Town of Oliver Springs, which includes portions of Anderson, Roane, and Morgan counties. He received a B.S. in political science from Middle Tennessee State University. He also has numerous certifications from the State of Tennessee, including as a water and wastewater treatment plant operator. He lives in Oliver Springs and is interested in city/county government and environmental issues.

Ann (Harriett) McCurdy retired in 2014 after more than 40 years as a teacher for middle- and high-school students both in the United States and abroad, with a focus on the sciences. Most recently she served as a teacher of science and biology for grades 6-10 at Yangon Academy in Yangon, Myanmar. Prior to that, she taught a variety of science courses and environmental studies courses in China, Morocco, Kuwait, and Ecuador. Harriett received an M.A. in teaching biology and her teaching certificate

from Washington University and a B.A. in biology from Earlham College. She is president of the Oak Ridge League of Women Voters and a member of Tennessee Citizens for Wilderness Planning, which is dedicated to achieving and perpetuating protection of natural lands and waters by means of public ownership, legislation, or cooperation of the private sector with a focus on the Cumberland and Appalachian regions of Tennessee. Harriett lives in Oak Ridge and is interested in educational and environmental issues.

Christine Michaels is president of the Oak Ridge Chamber of Commerce. She received a bachelor of science in Public Relations from Empire State College and has an Economic Gardening Certification for entrepreneurial economic development and an Institute for Organization Management certification from the U.S. Chamber of Commerce. She is a member of several organizations including: the Anderson County Economic Development Board, Adventure Anderson County (tourism board), Altrusa Foundation Board, Flatwater Tales Storytelling Festival Committee, and the East Tennessee Economic Development Board. She is a Paul Harris Fellow with the Rotary Club. Christine lives in Oak Ridge and is interested in economic development and business issues.

Charles Moore is a source house technician with Mirion Technologies and is pursuing a degree in chemistry from Roane State Community College. He is interested in economic development and environmental issues. He lives in Knoxville.

Tonya Shannon works in accounts payable in the finance department for Morgan County and serves as a funeral director through Service Corp. International. She lives in Wartburg and is interested in public health and civic issues.

Michael Sharpe is a SharePoint administrator and performs other technology- and web-based tasks for Oak Ridge Associated Universities, which manages the Oak Ridge Institute for Science and Education for DOE. It provides science, education, workforce development, and health services that include some OREM areas such as decontamination verifications to support cleanup. He received a B.S. in business administration from Tusculum University and an A.S. in computer programming from ITT Technical Institute. He is interested in civic and environmental issues and lives in Lenoir City.

Rachel Stewart is a recent UT Knoxville graduate with a bachelor of arts in College Scholars with an emphasis on Environmental Justice and Radioactive Waste Management. She interned with the Nuclear Threat Initiative in Washington, DC, during the summer of 2023. Rachel lives in Knoxville and is interested in public health and minority issues.

Thomas Tuck is a banking executive with TNBank. He served as president of the bank since 1995 and in March of 2020 transitioned to part-time employment as part of a leadership transition/retirement. He received a B.S. in business and marketing from the University of Tennessee and is a Certified Banker through the School of Banking of the South. He is a member of boards of directors for local organizations including the Oak Ridge Chamber of Commerce, Oak Ridge Heritage & Preservation Association, and the East Tennessee Economic Council. He is a member of the Y-12 Community Relations Council. He is interested in civic issues and economic development. He lives in Knoxville.

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
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
X-10 – Oak Ridge National Laboratory (refers to the original reactor)
Y-12 – Y-12 National Security Complex
ZPR – Zero Power Reactor