

Oak Ridge Site Specific Advisory Board Monthly Meeting



Wednesday, November 9, 2022, 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

PRESENTER BIO

CALENDARS

1. November
2. December (draft)

BOARD MINUTES/RECOMMENDATIONS & MOTIONS

1. ORSSAB Officer Nominations FY 2023
2. Draft June 8, 2022 Full Board Meeting minutes for approval

REPORTS & MEMOS

1. Responses to Recommendations
 - a. EM SSAB Chairs Recommendation on the Membership Process
 - b. EM SSAB Chairs Recommendation on Strategic Vision Stakeholder Communication
 - c. EM SSAB Chairs Recommendation on Outreach
2. Abbreviations & Acronyms
3. FY 2023 Incoming Correspondence
4. FY 2023 Travel Opportunities
5. Member Bios



Oak Ridge Site Specific Advisory Board
Wednesday, November 9, 2022, 6:00 p.m.
Hybrid meeting
AGENDA

- I. Welcome and announcements (L. Shields) 6:00–6:05
- II. Comments from federal and state agency representatives
(L. Wilkerson, R. Petrie, S. Urquhart-Foster, K. Czartoryski)..... 6:05–6:10
 - A. Recognition of outgoing board members (L. Wilkerson)
- III. Presentation: Processing of U-233 Material (N. Felosi)..... 6:10–6:30
 - Issue Group: TBD**
– *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
 - i. Board members
 - ii. Guests – Please indicate you wish to speak by using the “raise hand” action in Zoom and wait to be acknowledged. Or you may type your question in the chat window.
- 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, November 14, 2022.*
- V. Call for additions & motion to approve agenda (L. Shields) 6:50
 - B. Requests for new action items
 - C. Next meeting – No December or January regular meeting. Board meets February 8, 2023, and EM/Stewardship Feb. 22 to discuss Ongoing Efforts to Assure Sufficient Waste Disposal Capacity.

————— *This ends the presentation portion of the meeting – presenters and subject experts may depart* —————

- VI. Board Business (L. Shields)..... 7:00–7:10
 - A. Vote on officers for FY 2023 (M. Noe)
 - B. Vote to Approve Previous Meeting Minutes
 - a. Minutes of June 8, 2022
- VII. Responses to recommendations & alternate DDFO’s report (M. Noe) 7:10–7:15
- VIII. Committee reports..... 7:15–7:20
 - A. EM/Stewardship (M. Sharpe)
- IX. Additions to agenda & closing remarks (Shields)..... 7:20–7:30
 - A. Members remain for outgoing and board photos
- X. Adjourn 7:30

Nathan Felosi is the portfolio federal project director for environmental cleanup at the Oak Ridge National Laboratory (ORNL) as part of DOE's Oak Ridge Office of Environmental Management (OREM).

As federal project director, Felosi oversees all the planned and ongoing environmental cleanup operations at ORNL. That work includes decommissioning and demolishing ORNL's former nuclear research and isotope production facilities, eliminating the inventory of uranium-233 stored at the site, ensuring aging buildings and waste treatment systems remain safe, and completing the processing and disposal of the remaining transuranic waste.

Previously, Felosi served as the Engineering Branch Chief for OREM. He brings more than 20 years of experience in operations, construction, engineering, and project management within DOE, the U.S. Army, and private industry to his new role.

He is a registered Professional Engineer in the state of Tennessee, and he is a certified Project Management Professional. Felosi has certifications in civil/structural engineering, nuclear safety, occupational safety, and project management. He earned his bachelor's degree in civil engineering from the University of Tennessee.



Oak Ridge Site Specific Advisory Board

November

2022

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2 Executive Committee meeting – 4 p.m.	3	4	5
6	7	8	9 Board meeting – 6 p.m.	10 U-233 Project Tour – 1 p.m. (members only)	11 Veterans Day – Board offices closed	12
13	14	15	16	17	18	19
20	21	22	23	24 Thanksgiving Day – Board offices closed	25	26
27	28	29	30			

All meetings will be held virtually until further notice. For information about attending meetings, 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



December (draft)

2022

Topic: Groundwater Remedies

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25 Christmas Day	26 Christmas (Observed) – Board offices closed	27	28	29	30	31

All meetings will be held online via Zoom until further notice. For information about attending meetings virtually, please email orssab@orem.doe.gov at least 1 week prior to the scheduled meeting.

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Oak Ridge Site Specific Advisory Board

Officer Elections

Wednesday, November 9, 2022

Staff communicated by email to solicit interest in running for board officer positions.

With no other expressed interest in sitting on the Executive Committee for this upcoming year, the following list of candidates is submitted for consideration at the November ORSSAB meeting:

- **Chair:**
Leon Shields – Leon is currently chair and has been a member of the board since 2017.
- **Vice Chair:**
Amy Jones – Amy is currently vice chair and has been a member of the board since 2019.
- **Secretary:**
Michelle Lohmann – Michelle is currently vice chair and has been a member of the board since 2017.

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.**



Many Voices Working for the Community

Oak Ridge Site Specific Advisory Board

Monthly Meeting of the Oak Ridge Site Specific Advisory Board

DRAFT June 8, 2022 Meeting Minutes

The Oak Ridge Site Specific Advisory Board (ORSSAB) held its monthly meeting virtually via Zoom on Wednesday, June 8, 2022 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

Lorna Hollowell
Amy Jones, Vice Chair
Shell Lohmann, Secretary

Thomas McCormick
Harriett McCurdy
Michael Sharpe

Leon Shields, Chair
Bonnie Shoemaker
Tom Tuck

Members Absent

Thomas Geissberger
Chris Hampel
Noah Keebler
Greg Malone

Marite Perez
Georgette Samaras
Fred Swindler
John Tapp

Rudy Weigel
Zach Wilkin

Liaisons, Deputy Designated Federal Officer, and Alternates Present

Sam Scheffler, OREM
Melyssa Noe, ORSSAB Alternate Deputy Designated Federal Officer (DDFO), OREM
Kristof Czartoryski, Tennessee Department of Environment and Conservation (TDEC)
Samantha Urquhart-Foster, U.S. Environmental Protection Agency (EPA)

Others Present

Shelley Kimel, ORSSAB Support Office
Sara McManamy-Johnson, ORSSAB Support Office
Roger Petrie, OREM
Michael Pribish, DOE
Carl Froede, EPA
Craig Van Trees, EPA
Samantha Pack, UCOR
Bob Gellinas, UCOR
Heather Lutz, TDEC
Eileen Marcillo, TDEC
Jared Brabazon, TDEC

Twelve members of the public were present.

Liaison Comments

Ms. Noe – Ms. Noe told members that United Cleanup Oak Ridge began its new contract with OREM on May 23. She said UCOR finished its previous contract, which focused on the cleanup of the East Tennessee Technology Park (ETTP), \$100 million under budget. The new contract has a ceiling of \$8.3 billion for the next ten years, and the scope will focus on Y-12 National Security Complex (Y-12), an finishing soil and groundwater remediation at ETTP.

She also told members the first episode of OREM's new monthly newscast aired on May 22. The show focuses on raising awareness in the community about the full scope of OREM's progress and partnership, and episodes will air on community television in Oak Ridge and Knoxville on Sundays at 5 p.m. She said the next episode will air on June 19 and will spotlight member Bonnie Shoemaker.

Ms. Noe then told members OREM had a public meeting about the proposed Environmental Management Disposal Facility (EMDF) on May 17, with more than 100 people attending, including EPA, TDEC, stakeholder organizations, and others. She said the public comment period continues through June 7, and there is a website available with more information.

Ms. Samantha Urquhart-Foster – Ms. Urquhart-Foster said she was grateful for the positive public meeting held recently with DOE. She said one of EPA's top priorities is groundwater, so she was looking forward to the evening's groundwater presentation and for the upcoming meeting scheduled to discuss "big-picture items" for groundwater.

Mr. Czartoryski – Mr. Czartoryski said groundwater is also a priority for the State and he added that most of the data from monitoring wells on the Oak Ridge Reservation (ORR) is historical data, so it is important to delineate the extent of the plumes to assist in making the decisions that will lead to the protection of human health and the environment.

Presentation

Ms. Jones introduced Sam Scheffler, presenter for the evening's topic on Groundwater Remedies.

Mr. Scheffler began his presentation by showing members an overview map of the ORR to illustrate the specific area of the reservation being discussed. He said the focus for the evening is on ETTP's Zone 1, Zone 2, K-31/K-33 Area, and Main Plant Area in the northwestern portion of the reservation.

Mr. Scheffler told members OREM will soon be looking for more public engagement via proposed plans for the K-31/K-33 Area and the Main Plant Area. He said at that time OREM will have selected a preferred cleanup alternative for those sites. He said OREM is still in the remedial investigation work plan phase for Zone 1.

In the K-31/K-33 Area, Mr. Scheffler said OREM has been collecting groundwater data for more than 30 years and now has a substantial amount of data. He said the data collection is reaching a point of diminishing returns so it's nearly time to decide on a preferred alternative for the remedy for the area. He told members OREM recently installed five piezometers in the K-31/K-33 footprints at the request of the State during the remedial investigation and feasibility study phase. This is the phase, he said, during which OREM is looking at alternatives or technologies to implement a remedy. He said the sources of the groundwater contamination have been already been remediated.

Mr. Scheffler then went into additional detail on the legacy materials affecting this area and their origins. He said chromium and nickel was used previously in this area, and levels for these materials have been detected in wells at levels just above and just below the maximum allowable level, which is the highest limit allowable for the materials in drinking water per EPA national drinking water regulations. He said because of those levels, OREM's preferred alternative for the K-31/K-33 Area likely would be monitored natural attenuation. He said this would involve continuing to monitor and allowing natural processes to remediate the materials to below the maximum allowable level.

Next, Mr. Scheffler focused his attention on the Main Plant Area, where he detailed the legacy materials affecting this area and their origins. He said the chlorinated volatile organic compounds (CVOCs), more specifically, trichloroethylene (TCE), have migrated into the ground sub-grade and bedrock in this area. For these materials, he said, OREM is considering proposing a monitored natural attenuation demonstration study. He then told members OREM has considered a variety of technologies and combinations of technologies to address CVOC sources, and the proposed preferred alternative in the proposed plan recently submitted to regulators involves enhanced in-situ bioremediation.

Mr. Scheffler then discussed Zone 1, for which he said OREM is currently working with regulators on the remedial investigation work plan to determine what investigation data is still need for that area and how to best collect that data. He said the current milestone date for a proposed plan for that area is in fiscal year 2025.

After the presentation, board members asked the following questions:

- Mr. Tuck asked for clarification on when the most recent wells were installed in the K-31/K-33 Area. He then followed up to ask if he understood correctly that a handful of the wells were hovering around drinking water quality and whether there was an estimated time frame for how long natural attenuation would take to resolve the K-1401 plume.
 - Mr. Scheffler said the five piezometers referenced earlier were installed around 2019-2020. He confirmed that a handful of wells were hovering around drinking water quality. Regarding the K-1401 area, he said an active remedy – likely enhanced in-situ bioremediation – would be required in that area.
- Mr. Tuck then asked if there was an estimated time frame for when the K-1401 plume would be at the target quality.
 - Ms. Pack said the first interim remedy is addressing the primary source area in the shallow zone, and since the K-1401 plume has migrated to bedrock, it's not part of this decision so an estimated timeframe is not currently available. She said the proposal includes implementing active in-situ bioremediation for five years and then re-evaluating.
- Ms. McCurdy said that in comparing maps of plumes from 2019 to the current maps, some plumes appear to have shrunk and she asked if that was the result of natural attenuation.
 - Mr. Gellinas said one would not see significant natural attenuation over such a short period of time.
 - Ms. Pack added that earlier maps included wide swaths of areas that did not have any wells but were assumed to contain contamination. During the K-1401 treatability study, additional wells were installed and it was discovered that some areas in that swath were not contaminated and the newer maps reflect that.

- Ms. McCurdy then asked whether industrial plumes similar to these exist in other parts of the country for which these remedies could then be later used.
 - Mr. Gellinas said these types of plumes are very common throughout the country and in-situ bioremediation is a mature technology that has been used in thousands of sites worldwide. He said the 7000 area at the Oak Ridge National Laboratory (ORNL) had a demonstration pilot several years ago that showed great efficacy, and geology in both areas are similar enough to believe the remedy would be very successful in this area also.
- Mr. Sharpe asked whether the VOCs at the K-1232 plume are making their way into Poplar Creek.
 - Mr. Gellinas said they are, at very dilute concentrations.
- Mr. Czartoryski asked for clarification on adaptive management and he asked for EPA's position on adaptive management.
 - Ms. Pack said adaptive management is a concept in which you try something, see how well it works, and adapt to whether it's working or not. She said you can have formal decision criteria, if/then statements, with which you can learn as you go and adapt to that.
 - Mr. Froede said adaptive management is a tool EPA recognizes. He said it's an iterative tool that allows you to review data and make changes based on that data, and while the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) process already has that adaptability, adaptive management gives a better way to document it. He added that the complete development of adaptive management as applied to remediation sites was never fully developed before a new administration came in, so it's not complete. He said EPA has recommended in comments that DOE consider using the CERCLA process to avoid confusion in terms.

Questions from the Public

None

Public Comment

None.

Board Business/Motions

1. Mr. Shields asked for a motion to approve March 9, 2022 meeting minutes.
 - a. **6.8.22.1 Motion to approve March 9, 2022 meeting minutes**
Motion made by Ms. Lohmann and seconded by Ms. Jones. Motion passed.
2. Mr. Shields asked for a motion to approve the May 11, 2022 meeting minutes.
 - a. **6.8.22.2 Motion to approve May 11, 2022 meeting minutes**
Motion made by Ms. Jones and seconded by Mr. Sharpe. Motion passed.
3. Mr. Shields asked for a motion to approve the FY 2024 Budget Recommendation.
 - a. **6.8.22.3 Motion to approve the FY 2024 Budget Recommendation**

Motion made by Ms. Jones and seconded by Ms. Lohmann. Motion passed.

Responses to Recommendations & Alternate DDFO Report

Ms. Noe reminded members the Annual Planning Meeting was scheduled for August 13 in Townsend, Tennessee at the Tremont Lodge and asked members to let staff know if they planned to attend.

Committee Reports

Executive – Mr. Shields asked members to consider participating in leadership positions on the board, noting that several current members will be retiring from the board at the completion of this term.

EM & Stewardship – Mr. Sharpe told members that OREM’s Dennis Mayton attended the last committee meeting to discuss EMDF and waste acceptance criteria. Also during the last committee meeting, members discussed the FY 2024 Budget Recommendation.

Additions to the Agenda & Open Discussion

None.

Action Items

Open

None

Closed

None

The meeting adjourned at 6:55 p.m.

I certify that these minutes are an accurate account of the June 8, 2022, meeting of the Oak Ridge Site Specific Advisory Board.

Leon Shields, Chair

Michelle Lohmann, Secretary

November 9, 2022

Oak Ridge Site Specific Advisory Board

ML/sm

ENVIRONMENTAL MANAGEMENT SITE-SPECIFIC ADVISORY BOARD

Hanford Idaho Nevada Northern New Mexico
Oak Ridge Paducah Portsmouth Savannah River

June 30, 2022

Mr. William “Ike” White
Senior Advisor for the Office of Environmental Management (EM)
U.S. Department of Energy (DOE)
1000 Independence Avenue, SW
Washington, DC 20585

Dear Mr. White:

On October 7, 2021, the Chairs and Vice-Chairs of the EM Site-Specific Advisory Board (SSAB) passed the following recommendation concerning the EM SSAB membership appointment process. This recommendation was subsequently approved by all eight local boards of the EM SSAB.

Background

The work of the EM SSAB is in support of Department of Energy (DOE) programmatic missions focused on environmental cleanup of post-war nuclear and chemical contamination. At each of our respective sites, that work has been substantially and adversely impacted over the course of the past few years, in part, because of the length of time it is now taking to get appointment letters approved for individual Board members to participate. It has hamstrung Board abilities, at each site, to fulfill DOE goals for development and incorporation of public policy advice concerning the nature of cleanup and many other issues. For example, often potential members apply and later withdraw their applications due to extended delays in the appointment process. Boards have had to delay providing advice or recommendations due to a lack of membership, coupled with the loss of Board or Committee chair leadership while they wait for appointment approval. Reduced Board membership has also limited the development of institutional knowledge, so necessary at sites whose cleanup missions will extend decades into the future. In some cases, experienced and informed members are handicapped by a year or longer gap between their terms because they lack the special and immediate access to information on emerging issues that active members receive. More significantly, the extended approval process, which has often resulted in depleted Board rosters, has reduced Board legitimacy, and eroded public confidence in the DOE, including attracting complaints from community organizations and negative media coverage.

Examples of negative impacts specific to each site are attached to this recommendation.

Recommendation

The EM Site-Specific Advisory Board (EM SSAB) believes that the Department of Energy (DOE) should substantially revise the membership approval process to ensure that the continuity of Board and Committee activities is protected and remains intact such that there is no disruption of stakeholder involvement and input as per each Board's respective chartering agreements and operating rules.

While the larger effort to comprehensively revise the SSAB membership approval process is pursued by the Designated Federal Officer for the EM SSAB and in order to further enable stakeholder participation at their respective sites during this endeavor, the EM SSAB recommends:

1. The membership review and approval process should include all reasonable activities necessary to prevent lapsed memberships. A lapsed membership is defined as: a membership held by a member in good standing whose term has expired but has not reached the six-year limit.
2. The site manager should be empowered to temporarily extend the terms of lapsed members in good standing or to temporarily appoint other qualified members to replace lapsed members until a new membership package is approved.¹
3. The DOE should publish the review and appointment process and then take feedback from the public and EM SSAB members. The published information should identify which elements are required by the Federal Advisory Committee Act, the General Services Administration, and the EM SSAB charter, and which elements are internal to the DOE, as well as where those DOE policies and procedures can be found.

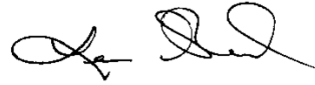
These recommendations are respectfully submitted by the below signed chairs of the respective SSABs.



Steve Wiegman, Chair
Hanford Advisory Board



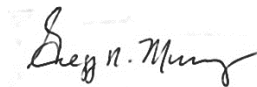
Frank Bonesteel, Chair
Nevada SSAB



Leon Shields, Chair
Oak Ridge SSAB



Don Barger, Chair
Paducah CAB



Gregg Murray, Chair
Savannah River Site CAB



Cheryl A. Atcitty, Chair
Northern New Mexico CAB



Jody Crabtree, Chair
Portsmouth SSAB



Teri Ehresman, Chair
Idaho Cleanup Project CAB

cc: Kelly Snyder, EM-4.32

¹ For a related authority see the DOE EM SSAB Policies and Procedures Desk Reference (June 2013), Section III.C on "Delegated Authority to the Field for Member Appointments."

ENVIRONMENTAL MANAGEMENT SITE-SPECIFIC ADVISORY BOARD

Hanford Idaho Nevada Northern New Mexico
Oak Ridge Paducah Portsmouth Savannah River

June 30, 2022

Mr. William “Ike” White
Senior Advisor for the Office of Environmental Management (EM)
U.S. Department of Energy (DOE)
1000 Independence Avenue, SW
Washington, DC 20585

Dear Mr. White:

On October 7, 2021, the Chairs and Vice-Chairs of the EM Site-Specific Advisory Board (SSAB) passed the following recommendation concerning best practices for stakeholder and community interaction at EM sites. This recommendation was subsequently approved by all eight local boards of the EM SSAB.

The EM SSAB was tasked with identifying EM SSAB expectations and guiding principles to be used as a complex-wide framework for DOE EM’s interactions with stakeholders and communities. The process included each board documenting their expectations and suggestions for how DOE EM should interact with local stakeholders and communities to reach EM’s 10-year strategic vision. These results from the individual boards were presented at the EM SSAB Chairs Meeting in April 2021.

The EM SSAB then formed a subcommittee to develop a compilation of guiding principles (attached). The EM SSAB recommends that DOE EM consider these important principles when communicating with the public.

- Attachment #1, *EM SSAB Expectations and Guiding Principles for Stakeholder Communication*, principles developed and recommended by the EM SSAB.
- Attachment #2, *Charge Responses Compiled*, contains the PowerPoint slides provided by each SSAB Chair at the Spring 2021 Virtual Chairs Meeting. The slides provide a detailed listing of the improvement opportunities offered by each of the SSAB chairs.

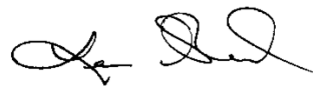
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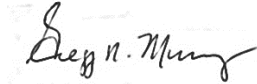
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Jody Crabtree, Chair
Portsmouth SSAB



Teri Ehresman, Chair
Idaho Cleanup Project CAB

cc: Kelly Snyder, EM-4.32

Attachments

1. Attachment #1, *EM SSAB Guiding Principles for Stakeholder Communication*
2. Attachment #2, *Charge Responses Compiled*

EM SSAB Expectations and Guiding Principles for Stakeholder Communication

10 Year Strategic Plan Development:

- 1) DOE should hold 10 year Strategic Vision public meetings every year, at each site, in order to share the next iteration of programmatic goals, including discussions of successes, roadblocks, course changes, new scopes of cleanup and recognition of potential uncertainties. Public tutorial meetings should be held two weeks in advance of the beginning of any formal Public Comment period in order to build a common knowledge base.
- 2) EM Sites have the commonality of specific, near-term, three to five year, plans. These specific site plans should all trigger public involvement campaigns, outlining yearly updates on their next respective, goals. Site near-term plans should be aligned with 10 year Strategic Plan goals such that near-term plans can be used iteratively to benchmark programmatic progress.
- 3) Regarding the Strategic Vision, in addition to reducing jargon and allowing for a quicker means of identifying or getting to information pertinent to a specific site, the document needs a better explanation of how the priorities are established. What criteria are used with regard to public health, environmental risks, local economies, cost to complete, land transfers, etc.? Not details for each site, but an overall explanation of the process. This might help people understand why some sites have larger budgets or seem to be more active. Local SSABs are probably knowledgeable about planning for their sites, but each board should have some education on national priorities.

Communication:

- 1) DOE should put forth a concerted effort to define terminology so that FACA Boards and the public understand what is being considered and asked for, from them, within the decision matrix to be discussed. DOE needs to clearly communicate the boundaries of what is being considered. Additionally, DOE should articulate, in what manner, public policy advice can be successfully received by DOE-EM in order to see it incorporated into DOE's pending decisions. Lastly, DOE must convey how they will respond to public comments.
- 2) Utilize the strength of the SSAB Board's experiences and longevity by having them help to facilitate public meeting design, timing and locations. DOE-EM SSABs are now long-standing. They are formed from broad representation of the communities they represent and as such have the ability to help DOE regionalize presentations.
- 3) Evaluation of SSAB effectiveness should be based on several factors. This should include development of, but not limited to, guidance on when and what types of recommendations are needed. Although less objective, evaluative assessments from community stakeholders, DOE, DOE contractors, regulatory personnel and the SSAB's themselves should be incorporated.
- 4) Activities at some sites are long term and have reached the stage where little change is seen during the tenure of a typical SSAB member. Hence, the need for major decisions and recommendations is less or non-existent. Maintaining SSAB member interest is difficult. In this situation, DOE should consider ways to involve the SSABs in less consequential decisions and public outreach. DOE should

also consider what types of education might provide a better background for recommendations, decisions, community outreach that will occur in the future.

5) Written communication produced by DOE and the SSABs that is intended for the general public should be reviewed by site Public Affairs to verify that the use of jargon or uncommon terminology is understandable to a non-technical audience.

Public Involvement:

1) DOE should embrace the tenet that institutional knowledge and transparency in all aspects of the cleanup program is an essential component of building informed, useful and supportive public policy advice from the SSAB Boards, Tribes and the public. By engaging the public early and often, DOE can utilize the SSAB Boards and their operating structures such that they help prepare future generations of Board members and the public for informed engagement.

2) DOE should support STEM program development for local schools and colleges with curriculum development. Efforts should include supporting development of trained people for trade-focused careers.

3) DOE should actively provide opportunities for informational engagement and coordinate with the EM SSAB meeting schedule to the extent possible.

4) DOE should hold public tutorial meetings in order to share DOE interactions with regulatory bodies and formally convened scientific panels. Building a collective, scientific basis for remediation pathway development that incorporates informed public policy recommendations should be the goal.

5) SSAB membership should be consistent in reflecting community educational levels, proximity, racial and cultural diversity, and income levels. An exact mirror of the community is not necessarily beneficial. Interest and commitment are most important. Including actual stakeholders affected by public health or environmental risks or community economic and political factors is more important than simply looking at the community demographics. Also, having people that can contribute to SSAB decisions because of experience, education, and connections in the community is important. One criterion that should be emphasized is a member's willingness and ability to communicate with the general public.

6) Introductory training for new board members appears to be inconsistent. Site tours and in-person instruction should be required. These should be supplemented by online or other virtual resources. In addition to DOE and/or contractor personnel, current SSAB members should be involved in the tours and training. Introductory training can be spread out over time, but should be separate from SSAB meetings. A more formal schedule of when new SSAB members are added should be established to allow for a better introductory training schedule and to reduce the need for continual repetition of information that has already been addressed by longer term SSAB members.

7) Because of COVID, virtual meetings have become routine. Although these meetings allow for participation of people geographically distant or with health issues, they are not as effective regarding communication within and between SSAB, DOE, regulatory personnel, DOE contractors, and the general public. Virtual meetings allow for a lessened commitment among participants. SSAB in-person meetings should be prioritized, with hybrid meetings as needed.

Risk Communication:

- 1) DOE should address the Boards and the public on how risk assessments affect prioritization and decision making.
- 2) Training should be provided to Board members on communications surrounding high-profile or sensitive issues.

Charge #2 – SSAB Expectations/ Guiding Principles

- Identify SSAB 10-year expectations and guiding principles that could be used as a complex-wide framework for DOE EM's interaction with stakeholders/communities
 - Utilizing the current EM 10-year Vision*, each Board will document their expectations for how DOE EM will interact with local stakeholders/communities to reach that 10-year vision (a template will be provided to each board)
 - Each Board will present their results during the Spring 2021 Chairs meeting
 - The Chairs will collaboratively discuss the individual Board results, identify commonalties and develop a complex-wide SSAB expectations and guiding principles framework (Spring 2021 – Fall 2021)
- * 10-Year Vision can be found at [DOE-Strategic-Vision-LR.pdf \(energy.gov\)](#)

Top three suggestions for improving stakeholder interactions during the next 10 years:

- Would the improvement in remediation techniques warrant a review of the earlier sites remediated to ensure that they are remediated to the highest potential?
- Develop a Site EM Nevada Program History and Lessons Learned Compilation that accounts for developments throughout the Program's mission life-cycle, including initial mission statement.
- Coordinate with the State of Nevada Division of Environmental Protection (State Regulator) and the EM Nevada Program and seek mutual corporate knowledge to develop a historical summary, fact sheet, and lessons learned compilation that could be a reference input to an EM Nevada Program public affairs milestone plan for the 2020s.

Top three suggestions for improving stakeholder interactions during the next 10 years

- 1. Commit to openness and transparency**
- 2. Engage early before policy level decisions to get stakeholder buy in on cleanup**
- 3. Get back in the Trust Zone – good collaborative process is a scaffold upon which trust is built**

Top three suggestions for improving stakeholder interactions during the next 10 years:

- 1. Have relevant-topic poster session forums as add-on to regular NNM CAB meetings.**
- 2. Hold EM life-cycle cleanup vision public forums and invite public comment.**
- 3. Through NNM CAB newsletters inform the public on a more regular basis about environmental cleanup and legacy waste issues.**

Top three suggestions for improving stakeholder interactions during the next 10 years:

- **Increase public input/educational meetings on projects where feasible**
- **Expand workforce development, whether through contractors or DOE-direct activities.**
- **When remediating land, return it to a state available for some beneficial use whenever possible (recreational, business, conservation)**

Top three suggestions for improving stakeholder interactions during the next 10 years:

- The excavation of groundwater plumes and unlined landfills will not only provide fill material for the OSWDF, but also leave a healthier environment and cleaner footprint for future land transfer.
- While the successful coordination and completion of simultaneous waste cell construction, building D&D and landfill excavation are important, local stakeholders should hear more about monitoring efforts, the WAO and regulatory oversight benchmarks.
- The DOE and contractor workforce is a major source of pride for southern Ohio. Continued workforce training that produces safe, timely and quality work should be promoted to local communities for the benefits that it provides.

Top three suggestions for improving stakeholder interactions during the next 10 years:

- **Continue to develop and promote The Groundwater Success Story and comparable video series.**
- **Develop and share key metrics to help identify success and progress of the safe removal of contaminants as process buildings are prepared for demolition.**
- **Stand by Paducah's hallmark of focusing on financial/ safety/ environmental successes by continuing to be good stewards of taxpayer dollars by downsizing infrastructure through utilities optimization**

Description of site activity that needs to be completed	What does completion of this activity mean to the SSAB?	How would the SSAB like to see DOE EM interact with local stakeholders/communities to reach the completion vision?
<p>The endstate of the Savannah River Site will be the elimination or minimization of nuclear materials, spent nuclear fuel, plutonium, and waste through safe stabilization, treatment, and/or disposition. All EM-owned facilities will be decommissioned once work scope is complete. Waste units will be remediated. Contaminated groundwater will either be remediated or undergoing remediation. Units where residual materials are left in place will be under institutional controls comprised of access restrictions and land use controls, inspections, maintenance, monitoring, and remedial measures/corrective action(s), as appropriate. Land that can be safely returned to the public will be.</p>	<p>With the removal and offsite disposition of EM nuclear material and waste hazards, the remaining hazards at SRS will be orders of magnitude less in quantity and risk than the current hazards. Any residual hazards to onsite and offsite receptors will be significantly reduced to an acceptable risk level that is protective of onsite and offsite potential receptors and consistent with environmental laws and regulations.</p>	<p>DOE should continue to communicate program information to the stakeholder communities through a variety of methods and multi-media tools, in a collaborative and meaningful way to help surrounding communities take action to protect their health and safety. This includes continuing public outreach efforts by SRS.</p>

**The table shown is the result of our efforts on the original Charge 2. Our board has not met since the charge was changed.

Top three suggestions for improving stakeholder interactions during the next 10 years:

1. Better cross-complex communication - particularly when events at another location (i.e. WIPP) have meaningful impact on our cleanup progress.
2. In-person participation by EM administration for substantial events and milestones.
3. Proactive involvement about using ICP resources well before their existing mission is completed - thereby allowing for more efficient use of resources and employee skill-sets.

ENVIRONMENTAL MANAGEMENT SITE-SPECIFIC ADVISORY BOARD

Hanford Idaho Nevada Northern New Mexico
Oak Ridge Paducah Portsmouth Savannah River

June 30, 2022

Mr. William “Ike” White
Senior Advisor for the Office of Environmental Management (EM)
U.S. Department of Energy (DOE)
1000 Independence Avenue, SW
Washington, DC 20585

Dear Mr. White:

On October 7, 2021, the Chairs and Vice-Chairs of the EM Site-Specific Advisory Board (SSAB) passed the following recommendation concerning community engagement at EM sites. This recommendation was subsequently approved by all eight local boards of the EM SSAB.

Background

The EM SSAB understands that successful completion of the DOE-EM mission must include a significant community, public and stakeholder outreach. While DOE-EM has been engaging in public outreach from the beginning we believe that the effectiveness can be improved by any of several different approaches described in this document taking into consideration the complexity and uniqueness of each of the cleanup sites managed by DOE-EM.

Because of the challenges represented by the complexity and variety of sites with correspondingly different cleanup schedules, we are presenting a suite of potential activities that can be implemented by DOE EM and the SSABs at each of the sites but are applicable to all sites in some form. Individual site-specific advisory boards are in the perfect position to help develop and recommend implementation strategies because of our inherent connections within our respective communities. Advisory board involvement on DOE EM outreach would help by providing advice related to specific targeted areas based on feedback from actual communities and individuals who live near or are potentially impacted by site activities.

Below are observations from the SSABs developed during public outreach committee meetings. These are followed by specific recommendations from this committee.

Observations:

- Some SSABs feel that the relationship between DOE and their communities is top-notch, while others feel that the public stakeholders need greater involvement in the cleanup conversation as decisions are being made.
- SSABs tend to agree that DOE sites are most successful when they host and encourage frank,

transparent conversations with the public and regulators regarding the decisions that are being made and the challenges they face. These are often difficult and complex topics that the public is eager to understand and need to have the opportunity to ask questions and see their concerns addressed.

- Sites are most successful when they get in the “trust zone” with their local and regional stakeholders and partners.
- Frequent sharing of information about cleanup, schedules, and funding with local Chambers of Commerce and economic development organizations as well as city and county governments has been found to be very advantageous for one SSAB.
- Public involvement in shaping decisions is important to project success. In order to accomplish this overarching goal, several areas of the public involvement relationship could be improved. What is legally required is just the start.
- Public stakeholders appreciate when we see their values reflected in the activities, agreements, and products of site managers and regulators. Examples include DOE’s solicitation of board values and incorporation of those values in Federal Facility Agreement Public Involvement Plans, soliciting and incorporating board input on informational materials and effective public meeting designs.
- In-depth informational outreach is highly valued by the different SSABs.
 - This can take the form of monthly newsletters for those who cannot attend meetings, to virtual meetings that give the public access to SMEs on specific topics of interest, to regional in-person “dialogues” that promote a two-way communication between interested stakeholders and site managers from both DOE and the regulatory agencies.
 - Access to information digitally and in an approachable format are also highly valued in order to reach and inform the widest audience.
- Beyond virtual access, the ability to take in-person tours is deemed fundamental to the openness and transparency the public is seeking.
- In general, the SSAB boards are interested and willing to consult with DOE on how meetings and outreach materials are designed and distributed, and we encourage DOE to make use of this resource. New media such as videos, animations, virtual tours, regular newsletters, and digital histories are excellent tools for site outreach and education, and their continued development should be supported.
- Many sites like Paducah have a book on the history of the site.
 - These could be placed in the community, university, and local school libraries, city and county offices, tourism, and Chambers of Commerce offices.
 - These could also be presented to state and federal officials, Congressional delegation, state legislators and others.
- Exhibits on the history of the site and cleanup process placed in appropriate locations, such as area universities and colleges, city and county offices; public meetings regarding the site and cleanup and other appropriate locations.

Recommendation

We recommend that the individual site managers/designees and their advisory boards work together to discuss and determine which activities best suit their circumstances and respond to public needs. The detail, depth, and implementation plan should result from this collaborative effort. The following thematic areas of improvement were agreed upon by the Chair Public Outreach Committee and are offered as recommendations to DOE EM, as well as some specific recommendations within each thematic area. Site-by-site recommendations may be found in the attachments to this letter.

1. Develop an optimal design and platform for virtual and hybrid meetings and make the most of

virtual opportunities. Not only does this allow us to make the most of the change that COVID-19 brought to the world but allows access by members of the public that might not be able to travel to SSAB meetings.

- Utilize social media to quickly disseminate important information to the public, State and local governments, and stakeholders.
2. Maintain efforts for in-person outreach.
 - Make site tours for board members a requisite, and include the public, stakeholder groups, and the media whenever possible.
 - Utilize local museums to house displays for preserving site history or virtual museums to tell the story of the site using online format that can be accessed at any time.
 3. Outreach should be a mechanism for effective two-way communication between DOE-EM and the general public. DOE-EM outreach should seek to increase (1) the general public's awareness and understanding of DOE-EM activities as well as (2) actionable feedback from the general public regarding past, current, and future DOE-EM activities.
 - Engage the public early and often. Have interactive conversations with the public that allow the public to ask questions and get answers about complex subjects.
 - Share how public input has shaped or influenced cleanup decisions.
 - Ensure open and transparent decision making.
 - Promote success and planning ahead by incorporating and educating the public on strategic vision plans that cover at least the next 10 years.
 4. Continue to support and improve informational outreach products to engage the public.
 - Utilize existing digital media outlets (i.e., YouTube channels, papers, blogs, and newsletters) to broadcast timely information about current events and upcoming activities at a site. [NOTE: Nevada has their own YouTube channel.]
 - Create videos, animations, and diagrams to use at public presentations or posted on websites to present engaging content the public would be interested in.
 - Create a listing of historical articles and books relevant to each site that could be accessed through each site's website. Consider providing hyperlinks for the public to view these documents. EM sites provide databases or libraries of the technical reports produced for EM cleanup actions. The aforementioned historical articles and books would not duplicate the EM libraries but rather provide information that is less scientifically complex and technical for interested but perhaps less informed members of the public.
 - Messaging regarding the cleanup of environmental impacts from nuclear development and research at the sites should be prioritized and increased relative to other, non-cleanup messaging.
 5. Continue seeking ways to support and improve the impact of DOE's Site Specific Advisory Boards
 - Educate/inform the public, stakeholders, local and state officials and other appropriate entities on the purpose and responsibilities of the SSAB/CAB Boards in each community, including the current leadership and membership, through news releases, speaker presentations, social media, newsletters and other communication methods. When new leadership has been selected or new members have joined the Board, also announce the changes using similar methods as previously mentioned.
 - When DOE/EM officials visit EM sites, plan an opportunity to visit informally with local SSAB / CAB Board members in order to develop a relationship with its membership and to show that they are valued.
 6. Facilitate and support cross-site sharing of activities and public outreach resources.

Outreach efforts should be informed and motivated by relevant professional expertise and

related quantitative and qualitative metrics. To ensure ongoing progress, outreach efforts should be reviewed periodically by recognized experts in the field of government public outreach, and the outreach efforts should be adjusted as appropriate.

Additional Information

In preparation for this recommendation, the EM SSAB prepared the following three attachments that it believes represents viable activities and opportunities for effective public outreach that EM sites should consider in preparing public outreach plans.

- Attachment #1, *Outreach Activities for DOE EM, contractor, or SSAB*, is a compilation of outreach activities that have been used by SSABs with varying degrees of success. This can be used to develop approaches at Sites.
- Attachment #2, *Improvement Opportunities*, collates public outreach best practices submitted by the SSAB chairs at the Spring 2021 Virtual Chairs Meeting.
- Attachment #3, *Charge Responses Compiled*, contains the PowerPoint slides provided by each SSAB Chair at the Spring 2021 Virtual Chairs Meeting. The slides provide a detailed listing of the improvement opportunities offered by each of the SSAB chairs.

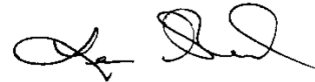
These observations and recommendations are respectfully submitted by the below signed chairs of the respective SSABs.



Steve Wiegman, Chair
Hanford Advisory Board



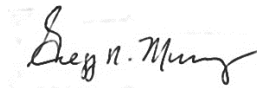
Frank Bonesteel, Chair
Nevada SSAB



Leon Shields, Chair
Oak Ridge SSAB



Don Barger, Chair
Paducah CAB



Gregg Murray, Chair
Savannah River Site CAB



Cheryl Atcitty, Chair
Northern New Mexico CAB



Jody Crabtree, Chair
Portsmouth SSAB



Teri Ehresman, Chair
Idaho Cleanup Project CAB

cc: Kelly Snyder, EM-4.32

References

1. Attachment #1, *Outreach Activities for DOE EM, contractor, or SSAB*
2. Attachment #2, *Improvement Opportunities*
3. Attachment #3, *Charge Responses Compiled*

Outreach Activities for DOE EM, contractor, or SSAB

1. Live, Virtual, or Hybrid Meetings – Annual or quarterly
 - a. State and local governments
 - i. Hazardous Waste Boards
 - ii. Water Councils or Boards
 - iii. Community Planning Boards
 - b. Civic organizations
 - i. Rotary
 - ii. Kiwanis
 - iii. Etc.
2. Public Releases
 - a. State and local newspaper articles
 - i. Digital
 - ii. Circulation
 - b. Federal Register Notices
 - c. Local TV newscasts
 - d. Podcasts
3. Social Media Posts
 - a. Facebook
 - b. Instagram
4. Website(s)
 - a. Local and national DOE EM
 - b. SSAB
 - c. State Environment Department
5. Public Involvement Calendars
 - a. DOE EM
 - b. SSAB
 - c. Digital News Media
6. Recorded Videos (available online and presented at meetings)
 - a. Environmental Cleanup Operations
 - b. Waste Disposal Sites
 - c. SSAB Organization and activities
 - d. Etc.
7. Training Opportunities – STEM and others
 - a. Presentations to K-12 school classes
 - b. Trade Schools
 - c. University training programs
 - d. Short courses (w/professional education credits)
 - e. Support of local non-profits for STEM education
8. Participation in Symposia/Conferences/Workshops
 - a. National Waste Symposia
 - b. DOE EM Cleanup
 - c. Etc.

IMPROVEMENT OPPORTUNITIES

SLIDE 2 NSSAB	SLIDE 4 HANFORD ADV. BOARD	SLIDE 6 Northern New Mexico Citizen's Adv. Board	SLIDE 7 OAK RIDGE SSAB	SLIDE 8 PORTSMOUTH	SLIDE 9 PADUCAH	SLIDE 11 Idaho Cleanup Project Citizens Adv. Board
<p>Recommend that additional ways be considered for outreach to communities, including schools; an example would be to develop a short video presentation available to the public on EM activities on the Nevada National Security Site (NNSS) and its path to closure.</p>	<p>What is legally required is just the start - public involvement in shaping decisions is important to project success</p>	<p>Re-institute NNM CAB monthly newsletter</p>	<p>Proactively extend outreach to a variety of community groups particularly in underserved areas; increase publicity of availability of DOE speakers.</p>	<p>While DOE and the SSAB have worked cooperatively on a plan, there is still a need to educate the local stakeholders on risk, environmental monitoring and health and safety protections provided by DOE and regulatory oversight.</p>	<p>The largest issue facing DOE is the need to be willing to promote its success in cleanup and educating the community. This was evident when DOE shared the Charge #1 Spreadsheet and CAB members were unaware of the extent of DOE's outreach.</p>	<p>Social media</p>
<p>Establish liaison with the school systems of nearby counties, including the NV System of Higher Education.</p>	<p>Increase efforts to engage and educate a wider and more diverse public</p>	<p>Combined Committee meetings should be held on at least alternate months of full NNM CAB meetings</p>	<p>Provide a central location for ongoing coverage of major projects, both DOE and external (media, etc.)</p>			<p>Cross-site sharing of activities that affect more than one site & public outreach resources</p>
<p>Examine status of completion of the recommendations in the FY 2018 Community Analysis - Work Plan Item #7 per the September 25, 2018 response from the EM Nevada Program, and expanding the virtual reality tour to that of the NNSS. (in progress)</p>	<p>Create space for collaborative problem solving</p>	<p>Allow use of hybrid virtual/in-person meeting format for full NNM CAB meetings, with restrictions</p>	<p>Develop simple, complete timeline of local EM projects/schedule and update regularly</p>			
<p>Handling of Board members could be enhanced by having better introduction to the community and improved exit. For example, it would have been most helpful for the administrators to prepare a letter to the respective city or community announcing the new board member and explaining the position, the rigorous selection and approval process, approval in Washington, DC, and their value to the community. At the end of a 6-year term, provide more than a photo, if that, to Board Members. (In NV, there is a gubernatorial volunteer recognition certificate for 200 hours/year of volunteer work that may be applied for).</p>	<p>Share how public input has shaped or influenced cleanup decisions</p>					
<p>Seek added funds to better support and provide recognition for Board Members.</p>	<p>Improve communication in intent and outcome of HAB advice</p> <p>Embrace and practice the principles of public involvement in HAB Advice</p> <ol style="list-style-type: none"> Engage the public early and often Ensure open and transparent decision making Prepare future generations for informed engagement 					
<p>Have a formal Public Affairs milestone plan prepared for the period 2021-2030 that lists the key news releases to be issued.</p>						
<p>The National Atomic Testing Museum (NATM), a Smithsonian affiliate, currently includes EM exhibits; coordinate with NATM to add EM exhibits as there is available space; University of Nevada, Las Vegas (UNLV) has an active public history program and experience with installing exhibits and can assist with coordination.</p>						
<p>Interface with NNSA/Nevada Field Office to explore potential for increasing the # of public tours; need to be aware that there will be a surge in interest and consider increasing frequency after the pandemic is over.</p>						

Charge #1 - Advisory Board and Site Outreach

- Develop a best practices white paper that the Department could use as a guide to augment existing outreach programs and set expectations for future outreach activities
 - Each Board shall identify existing outreach practices performed at their site by both the SSAB and DOE (a template will be provided)
 - Outreach data should include, but not limited to, STEM, budget prioritization, and events
 - Determine if there are any gaps or need for additional outreach
 - Each Board will present their results during the Spring 2021 Chairs meeting
 - The Chairs will collaboratively discuss the individual Board results and develop the requested white paper. (Spring 2021 – Fall 2021)

Best practices:

- **NSSAB**
 - Partnership and mutual cooperation between the DOE EM Nevada Program, Nevada State Regulator, and the NSSAB
 - Wide representation of members and liaisons with a diversity of talents, insights, and community voices from a large geographic area surrounding the Nevada National Security Site
 - Notable that NSSAB's make-up consists of stakeholders from the community, as well as professionals, in contrast to a strictly technical membership
- **YouTube Channel**
 - Historical, informational, and educational videos easily accessible to the public

Improvement Opportunities:

- Recommend that additional ways be considered for outreach to communities, including schools; an example would be to develop a short video presentation available to the public on EM activities on the Nevada National Security Site (NNSS) and its path to closure.
- Establish liaison with the school systems of nearby counties, including the NV System of Higher Education.
- Examine status of completion of the recommendations in the FY 2018 Community Analysis - Work Plan Item #7 per the September 25, 2018 response from the EM Nevada Program, and expanding the virtual reality tour to that of the NNSS. (in progress)
- Handling of Board members could be enhanced by having better introduction to the community and improved exit. For example, it would have been most helpful for the administrators to prepare a letter to the respective city or community announcing the new board member and explaining the position, the rigorous selection and approval process, approval in Washington, DC, and their value to the community.
- At the end of a 6-year term, provide more than a photo, if that, to Board Members. (In NV, there is a gubernatorial volunteer recognition certificate for 200 hours/year of volunteer work that may be applied for).
- Seek added funds to better support and provide recognition for Board Members.
- Have a formal Public Affairs milestone plan prepared for the period 2021-2030 that lists the key news releases to be issued.
- The National Atomic Testing Museum (NATM), a Smithsonian affiliate, currently includes EM exhibits; coordinate with NATM to add EM exhibits as there is available space; University of Nevada, Las Vegas (UNLV) has an active public history program and experience with installing exhibits and can assist with coordination.
- Interface with NNSA/Nevada Field Office to explore potential for increasing the # of public tours; need to be aware that there will be a surge in interest and consider increasing frequency after the pandemic is over.

Charge 1: Outreach Best Practices

- 1. Topic-specific briefings involving all three TPA agencies, HAB and agency initiated**
- 2. Opportunities for the public to talk with Hanford decision makers**
- 3. Soliciting input from the HAB re: meeting design, timing, and location**
- 4. HAB input on public materials**
- 5. HAB values in TPA Public Involvement Plan**
- 6. Public interactions with DOE and NRC**

Charge 1: Hanford Improvement Opportunities

- 1. What is legally required is just the start - public involvement in shaping decisions is important to project success**
- 2. Increase efforts to engage and educate a wider and more diverse public**
- 3. Create space for collaborative problem solving**
- 4. Share how public input has shaped or influenced cleanup decisions**
- 5. Improve communication in intent and outcome of HAB advice**
- 6. Embrace and practice the principles of public involvement in HAB Advice**
 - a. Engage the public early and often**
 - b. Ensure open and transparent decision making**
 - c. Prepare future generations for informed engagement**

Best practices:

- 1. Site tours of EM cleanup operations**
- 2. Effective use of digital newspapers**
- 3. Quarterly contractor cleanup forums around northern New Mexico**

Improvement Opportunities:

- 1. Re-institute NNM CAB monthly newsletter**
- 2. Combined Committee meetings should be held on at least alternate months of full NNM CAB meetings**
- 3. Allow use of hybrid virtual/in-person meeting format for full NNM CAB meetings, with restrictions**

Best practices:

- **Social media outreach and participation**
- **Use of video for project updates and education**
- **Regular presentations by leaders to solicit input from the community (ie Budget Workshop) and to provide education to stakeholders (schools, local organizations, community groups)**

Improvement Opportunities

- **Proactively extend outreach to a variety of community groups particularly in underserved areas; increase publicity of availability of DOE speakers.**
- **Provide a central location for ongoing coverage of major projects, both DOE and external (media, etc.)**
- **Develop simple, complete timeline of local EM projects/schedule and update regularly**

Best practices:

The Community Commitment Plan along with the contractual provisions for community engagement have made tremendous impacts to economic development in our impacted area. Quite literally millions of dollars have been donated that have turned into hundreds of jobs that would not be available without the CCP.

Improvement Opportunities:

While DOE and the SSAB have worked cooperatively on a plan, there is still a need to educate the local stakeholders on risk, environmental monitoring and health and safety protections provided by DOE and regulatory oversight.

Best practices:

DOE's relationship with the local community is top notch. Paducah embraces being a host community and this partnership between DOE and local leaders/elected officials is seen in events like the Chamber's DC Fly-In, the interactions between intergovernmental groups, and the local community's desire to celebrate DOE's successes.

Improvement Opportunities:

The largest issue facing DOE is the need to be willing to promote its success in cleanup and educating the community. This was evident when DOE shared the Charge #1 Spreadsheet and CAB members were unaware of the extent of DOE's outreach.

SRS Citizens Advisory Board

Charge #1 - Advisory Board and Site Outreach

Outreach Activity	Purpose/Driver of Outreach Activity	Level of Interest/Participation from Community	Notes/Comments
Public Tours	Information/Awareness of SRS	Tours are filled quickly once released to the public	SRNS produced a virtual tour for the public post-COVID that was released in early 2021
Mission-Related Tours	Information/Awareness of SRS	Tours are conducted for HQ staff, community stakeholders, educational groups and business partners based on a valid business need	Tours have been limited due to COVID restrictions but continue to be an excellent way for stakeholders and partners to learn about SRS first-hand
Meetings with Chambers of Commerce/ Economic Development	Information/Awareness of SRS, Update of activities	Attend organization events and meetings, regular phone calls and one-on-one meetings with directors (virtually during COVID), provide updates on SRS activities/missions, Members at-large for 5 local Chambers: Augusta Metro, Columbia County, North Augusta, Aiken, Southern Palmetto (Barnwell & Allendale Counties)	Many chamber hosted events and one-on-one meetings were held virtually in 2020. SRNS is also a member of the two largest regional economic groups in the CSRA: SouthernCarolina Alliance (Barnwell, Bamberg, Hampton, Allendale, Colleton, Jasper, Beaufort), Economic Development Partnership (Edgefield, Aiken)
Public Meetings	Information/Awareness, Supportive Attitude	A group of 80 local stakeholders are typically invited to attend	SRNS assists in hosting an annual update to community stakeholders via public meeting with all landlords and contractors in attendance. Updates on current/future missions at SRS were provided to stakeholders during one-on-one meetings post-COVID
Organizational Presentations	Information/Awareness, Supportive Attitude	Create standard SRS Overview to be used for presentations to civic organizations and other public settings; market speaker/presentation to community groups via a prioritized list of stakeholders and partners. Overview videos are also utilized in these presentations	Some overviews were conducted virtually post-COVID
Informal Meetings	Understanding, Supportive Attitude	State and federal representatives are briefed, status update at stand-alone meeting or is included in general SRS update meeting -Provide Site tours when requested, coordinate scheduling and content with DOE External Affairs	
News Releases	Information/Awareness	For each key milestone. DOE concurrence will be obtained on news release topic, followed by review/approval of specific news release. Examples include: - Significant visitors - Operational Achievements - Outreach Activities - Employee recognition	

The board approved the Excel template provided and did not address areas for improvement. Our board has not met since this slide was provided.

Best practices:

- Videos/animations/diagrams
- Frequent contribution of feature articles in EM Update Newsletters
- Press releases

Improvement Opportunities:

- Social media
- Cross-site sharing of activities that affect more than one site & public outreach resources

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



FY 2023 Incoming Correspondence

#	Date	To	From	Description	DOEIC, Notified board officers of receipt
4	10/5/2022	Petrie, DOE	Young, TDEC	Re: Erratum to the Remedial Investigation/Feasibility Study Report for the K-31/K-33 Area at the East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2893&D2)	DOEIC, Notified board officers of receipt
5	10/5/2022	Urquhart-Foster, EPA & Young, TDEC	Pribish & Petrie, DOE	Transmittal of the Erratum to the Remedial Investigation Work Plan for Remaining Ecology/Surface Water/Sediment at ETP (DOE/OR/01-2912&D2)	DOEIC, Notified board officers of receipt
6	10/6/2022	Petrie, DOE	Young, TDEC	Addendum to the Waste Handling Plan for Surveillance & Maintenance Activities - MSRE Area Groundwater Well Installation, Oak Ridge National Laboratory, Oak Ridge, Tennessee (DOE/OR/01-2565&02/ A6/R1)	DOEIC, Notified board officers of receipt
7	10/6/2022	Petrie, DOE	Young, TDEC	RE: Time-Critical Action Memorandum for the Poplar Creek Mudflat Removal at the East Tennessee Technology Park, Oak Ridge, Tennessee (AM-TCRmA) (DOE/OR/01-2937&D1)	DOEIC, Notified board officers of receipt
8	10/10/2022	Petrie, DOE	Andrews, EPA	EPA Letter: 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/R1)	DOEIC, Notified board officers of receipt
9	10/14/2022	Urquhart-Foster, EPA & Young, TDEC	Petrie, DOE	Final Submittal of an Erratum to the East Tennessee Technology Park Administrative Watershed Remedial Action Report Comprehensive Monitoring Plan, Oak Ridge, Tennessee (DOE/OR/01-2477&D4)	DOEIC, Notified board officers of receipt
10	10/17/2022	Petrie, DOE	Urquhart-Foster, EPA	EPA Comments: Phased Construction Completion Report for the Zone 1 Powerhouse Area Electrical Vaults at the East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2828&D3)	DOEIC, Notified board officers of receipt



FY 2023 Incoming Correspondence

#	Date	To	From	Description	DOEIC, Notified board officers of receipt
11	10/20/2022	Petrie, DOE	Young, TDEC	DOE Submittal of Proposed Changes to the Federal Facility Agreement for the Oak Ridge Reservation: Appendix C, Oak Ridge Remediation Sites, and Appendix B, Oak Ridge Site Description	DOEIC, Notified board officers of receipt
12	10/21/2022	Petrie, DOE	Young, TDEC	TDEC Comment Letter 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/R1)	DOEIC, Notified board officers of receipt
13	10/21/2022	Petrie, DOE	Young, TDEC	Comments Field Sampling Plan for Baseline Groundwater and Surface Water Characterization at the Proposed Environmental Management Disposal Facility (DOE/OR/01-2812&01)	DOEIC, Notified board officers of receipt
14	10/21/2022	Petrie, DOE	Young, TDEC	TDEC Approval: Phase 3 (Borrow Areas) Characterization Report for the Proposed Environmental Management Disposal Facility, Oak Ridge Tennessee (DOE/OR/01-2832&D1)	DOEIC, Notified board officers of receipt
15	10/21/2022	Petrie, DOE	Urquhart-Foster, EPA	EPA Approval of 2022 Remediation Effectiveness Report for the USDOE Oak Ridge Site Oak Ridge, Tennessee Data and Evaluations DOE-OR-01-2916-D2	DOEIC, Notified board officers of receipt
16	10/24/2022	Urquhart-Foster, EPA & Young, TDEC	Henry & Petrie, DOE	Transmittal of the Addendum to the Removal Action Work Plan for the Y-12 Facilities Deactivation/Demolition Project, Oak Ridge, Tennessee: Beta-1 Complex Demolition (DOE/OR/01-2479&D1/A14)	DOEIC, Notified board officers of receipt



FY 2023 Incoming Correspondence

#	Date	To	From	Description	DOEIC, Notified board officers of receipt
17	10/24/2022	Urquhart-Foster, EPA & Young, TDEC	Henry & Petrie, DOE	Submittal of 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)	DOEIC, Notified board officers of receipt
18	10/26/2022	Petrie, DOE	Urquhart-Foster, EPA	EPA Approval Record of Decision for Final Soil Actions in Zone 1, East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2711&D4)	DOEIC, Notified board officers of receipt
19	10/26/2022	Awasthi & Czartoryski, TDEC	Pribish, Felosi & Henry, DOE	Site Treatment Plan for Mixed Waste on the U.S. Department of Energy Oak Ridge Reservation – Submittal of the Annual Update and Semiannual Progress Report	DOEIC, Notified board officers of receipt
20	10/26/2022	Petrie, DOE	Young, TDEC	TDEC Comments: Erratum to the Remedial Investigation Work Plan for Remaining Ecology/Surface Water/Sediment at ETP (DOE/OR/01-2912 & D2)	DOEIC, Notified board officers of receipt
21	10/26/2022	Petrie, DOE	Young, TDEC	TDEC Approval Letter 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 the Isotope Row Facilities, Buildings 3029, 3030, 3031, 3032, 3033, 3033A, 3034, 3036, 3093, and 3118 (DOE/OR/01-2428&D2/A10/R1)	DOEIC, Notified board officers of receipt
22	10/27/2022	Urquhart-Foster, EPA & Young, TDEC	Pribish & Noe, DOE	Transmittal of the Phased Construction Completion Report for EU 22-25 in Zone 2, ETP (DOE/OR/01-2918 & D2)	DOEIC, Notified board officers of receipt



FY 2023 Incoming Correspondence

#	Date	To	From	Description	DOEIC, Notified board officers of receipt
23	10/27/2022	Petrie, DOE	Urquhart-Foster, EPA	EPA Approval of Erratum to the Remedial Investigation Work Plan for Remaining Ecology-Surface Water-Sediment at East Tennessee Technology Park, Oak Ridge, Tennessee	DOEIC, Notified board officers of receipt
24	10/27/2022	Haynes, UCOR	Felosi, Henry & Pribish, DOE	Contract Number 89303322DEM000067: Site Change Control Approval of Task Order 3 Baseline Change Request 0002	DOEIC, Notified board officers of receipt
25	10/28/2022	Petrie, DOE	Dawson, EPA	EPA Approval 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 the Isotope Row Facilities, Buildings 3029, 3030, 3031, 3032, 3033, 3033A, 3034, 3036, 3093, and 3118 (DOE/OR/01-2428&D2/A10/R1)	DOEIC, Notified board officers of receipt
26	10/31/2022	Petrie, DOE	Young, TDEC	TDEC Approval Letter Molten Salt Reactor Experiment Remedial Investigation Work Plan (DOE/OR/01-2881&D2)	DOEIC, Notified board officers of receipt
27	10/31/2022	Petrie, DOE	Young, TDEC	Waste Handling Plan for Pre-Demolition and Demolition of Ancillary Facilities at the Y-12 National Security Complex, Oak Ridge, Tennessee (DOE/OR/01-2863&D4)	DOEIC, Notified board officers of receipt
28	10/31/2022	Petrie, DOE	Young, TDEC	TDEC Comments: Addendum 2 to the Fiscal Year 2006 Phased Construction Completion Report for the Zone 2 Soils, Slabs, and Subsurface Structures (Exposure Unit Z2-42) at East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2317&D2/A2)	DOEIC, Notified board officers of receipt



FY 2023 Incoming Correspondence

#	Date	To	From	Description	DOEIC, Notified board officers of receipt
29	11/1/2022	Urquhart-Foster, EPA & Young, TDEC	Felosi & Petrie, DOE	Federal Facility Agreement Extension Request for WBV 1, WBV 3, WBV 5, WBV 7, and EU 9 Addendum A4 to the Remedial Design Report/Remedial Action Work Plan for Soils, Sediments, and Dynamic Characterization Strategy for Bethel Valley, Oak Ridge, Tennessee (DOE/OR/01-2378&D5/A4/R1)	DOEIC, Notified board officers of receipt

Travel Opportunities

Meeting/Event	Dates	Location	Cost	Additional Info
FY 2023				
Waste Management Symposium Requests:	February 26-March 2	Phoenix, AZ	TBD	www.wmsym.org
National Environmental Justice Conference & Training Requests: Jones	March 7-9	Washington, D.C.	NA	http://thenejc.org
2023 Spring Chairs Meeting <i>Board officers preferred</i> Requests: Jones, McCurdy	March 21-22	Washington, D.C.	NA	
RadWaste Summit Requests:	June 6-8	Las Vegas, NV	TBD	http://www.radwastesummit.com/
EPA National Brownfields Conference Requests:	August 8-11	Detroit, MI	TBD	https://brownfields2023.org/
2023 Fall Chairs Meeting Requests: NA	TBD	Oak Ridge	NA	
DOE National Cleanup Workshop Requests: Jones	TBD	Alexandria, VA	TBD	www.cleanupworkshop.com Request Deadline TBD
ORSSAB Annual Meeting <i>All members invited to attend</i>	TBD		NA	
Shaded trips are closed	<p>Due to the complexity of arranging government travel, please indicate your interest as soon as possible. Some events may book up to a year in advance. If more members request to travel than an event will allow, the Executive Committee will choose attendees.</p>			

ENVIRONMENTAL MANAGEMENT SITE-SPECIFIC ADVISORY BOARD IN OAK RIDGE

BIOGRAPHIES

Thomas Geissberger (Knox County). Mr. Geissberger is a recent college graduate who works at Publix and was previously a team director for the Tennessee Clean Water Network nonprofit. He graduated with a B.S. in Geology and Environmental Studies from UT in 2020 and received an A.A. in General Studies from Pellissippi State Community College. Mr. Geissberger is a member of the Phi Sigma Theta National Honor Society and Phi Kappa Phi Honor Society, completed the tnAchieves Program, and was selected for the Oak Ridge Associated Universities Higher Education Research Experience Program during his time as a student. He is interested in environmental and public health issues. He lives in Knoxville, Tennessee, and was appointed to the board in October 2021.

Chris Hampel (Roane County). Mr. Hampel recently retired from owning his own small business, Pressure Washing Solutions, which he formed in 2016. He previously worked at Energy Solutions, which is a contractor to the Department of Energy (DOE) at the Oak Ridge site. Mr. Hampel has a high school education and trade skill training related to his work experience. He is interested in environmental and business issues. He is a resident of Kingston, Tennessee, and was appointed to the Office of Environmental Management Site-Specific Advisory Board (EM SSAB) in December 2020.

Lorna Hollowell (Knox County). Ms. Hollowell has served as the assistant director of education and development in the Office of Equity and Diversity at UT, Knoxville, since September 2019. Ms. Hollowell holds an M.S. in education from the University of Minnesota, Duluth, and a B.S. in Organizational Management from Oakland City University. Ms. Hollowell is currently pursuing a Ph.D. in Higher Education Administration from UT and expects to graduate in 2026. She is interested in educational issues and minority issues. Ms. Hollowell lives in Knoxville, Tennessee, and was appointed to the board in October 2021.

Amy Jones (Anderson County). Ms. Jones is the senior benefit coordinator and a licensed insurance agent for Madison Insurance Group. She is also a sales manager for Arrowbroker and a real estate agent at Stephenson Realty & Auction. Ms. Jones was the owner of Double J Enterprises of TN, in Rocky Top, Tennessee, until mid-2018. A high school graduate, Ms. Jones has also received her real estate license and insurance license. She is active in a variety of community organizations including serving as an ambassador for the Anderson County Chamber of Commerce, vice chair for the Anderson County Republican Party, past vice chair of the Anderson County Headstart Policy Council, and chair for the State of Tennessee Order of Amaranth Diabetes Charity. She is a committeewoman on the State Executive Committee for the Tennessee Republican Party, past chair of the Women's Ministry Banquet at Main Street Baptist, and president of two groups in the Order of the Eastern Star. Ms. Jones is interested in environmental and county government issues. She lives in Briceville, Tennessee, and was appointed to the board in July 2019. She currently serves as vice chair of the EM SSAB in Oak Ridge.

Noah Keebler (Knox County). Mr. Keebler is the owner of Arc Transportation, a logistics and freight company. He was previously a nuclear electronics technician with Ametek, which is a manufacturer of electronic instruments and electromechanical devices (no business with DOE or EM). 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 certifications related to his work experience, including Occupational Safety and Health Administration training, electrical safety experience and radiation worker training. Mr. Keebler has an interest in environmental issues. He is a resident of Knoxville, Tennessee, and was appointed to the board in July 2019.

Michelle Lohmann (Knox County). Ms. Lohmann is the senior director of talent acquisition and brand at US Cellular. Previously, she was the program manager for the University Recruiting and Graduate Education Programs for Oak Ridge National Laboratory (ORNL)/UT. Ms. Lohmann is a member of the Loudon County Boys and Girls Club Advisory Board and has an interest in economic development and environmental issues. A high school graduate, Ms. Lohmann is now pursuing a joint BA/MA in organizational psychology. She resides in Knoxville, Tennessee. She currently serves as secretary of the EM SSAB in Oak Ridge and was appointed to the board in June 2017.

Gregory Malone (Roane County). Mr. Malone is a retired medical products development consultant. He operated Malone and Associates, Inc., an independent consulting firm, until 2019. Mr. Malone received a B.S. in Engineering with a Welding and Manufacturing concentration from Ohio State University. He is a member of the Oak Ridge Sportsmen's Association and a volunteer for the Great Smoky Mountains National Park. He is interested in environmental and economic development issues. Mr. Malone is a resident of Rockwood, Tennessee, and was appointed to the board in December 2020.

Thomas McCormick (Campbell County). Mr. McCormick is the city manager for the town of Oliver Springs, Tennessee, 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. Mr. McCormick lives in Jacksboro, Tennessee and is interested in city/county government and environmental issues. He was appointed to the board in December 2020.

Ann (Harriett) McCurdy (Anderson County). Ms. McCurdy retired in 2014 after more than 40 years as a teacher for middle- and high-school students both in the U.S. 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. Ms. McCurdy received a B.A. in Biology from Earlham College and an M.A. in Teaching Biology and her teaching certificate from Washington

University. She is president of the Oak Ridge League of Women Voters and a member of Tennessee Citizens for Wilderness Planning. Ms. McCurdy is a resident of Oak Ridge, Tennessee, and is interested in civic, environmental, and educational issues. She was appointed to the board in February 2019.

Marité Pérez (Knox County). Ms. Pérez is a mortgage loan officer at First Community Mortgage. Previously, she worked in a similar position with Mortgage Investors Group. Ms. Perez has also worked with Latin and Haitian communities in the Dominican Republic as a community economic development advisor through the Peace Corps. She has additional business experience as business development manager for a local solar firm ARiES Solar. Ms. Pérez is chair of Centro Hispano of East Tennessee, a nonprofit which promotes empowerment and civic participation of the multicultural community through education and social services. She is also vice chair of the National Association of Hispanic Real Estate Professionals. Ms. Pérez has a B.S. in Social Sciences/Foreign Affairs from Florida State University and an M.B.A. in Global Social Sustainable Enterprise from Colorado State University. She is interested in environmental issues. Ms. Pérez is a resident of Knoxville, Tennessee, and was appointed to the board in July 2018.

Georgette Samaras (Anderson County). Ms. Samaras is director of community outreach for the local hospital system Covenant Health. She has also served as an adjunct instructor of Psychology at Pellissippi State Technical Community College since mid-2018. She received an M.S. in Behavioral Psychology from Walden University, a B.S. in Molecular, Cellular, and Developmental Psychology from the University of Colorado, and she is pursuing a Doctorate in Educational Leadership and Organizational Development. Ms. Samaras is also a certified mind-body instructor through the Center for Mind Body Medicine. She is a volunteer with the USA Track and Field Federation and the Cancer Support Community. She is interested in environmental issues. Ms. Samaras resides in in Clinton, Tennessee, and was appointed to the board in July 2019.

Michael Sharpe (Loudon County). Mr. Sharpe is a SharePoint administrator and performs other technology- and web-based tasks for prime contractor Oak Ridge Associated Universities, which manages the Oak Ridge Institute for Science and Education (ORISE) for DOE. ORISE provides science, education, workforce development, and health services that include some Oak Ridge EM areas such as decontamination verifications to support cleanup. Mr. Sharpe received a B.S. in Business Administration from Tusculum University and an A.S. in Computer Programming from ITT Technical. Mr. Sharpe is interested in economic development and environmental issues. He is a resident of Lenoir City, Tennessee, and was appointed to the board in December 2020. He was recently elected co-chair of the board's EM Stewardship Committee.

Leon Shields (Loudon County). Mr. Shields is the director of water, wastewater, and natural gas operations for the Lenoir City Utilities Board in Lenoir City, Tennessee. He is also the owner of two small businesses: Instructional Concepts, which provides training in industrial, public, and private application of firearms, explosives, vehicle

extrication, and rescue operations; and Music City Speed & Nostalgia, which specializes in classic cars and vintage memorabilia. He is a member of multiple federal, state, and local boards, including planning commissions, boards of appeals, housing authorities, and advisory boards. A high school graduate, Mr. Shields is a member of several 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, among others. Mr. Shields has an interest in environmental issues. He resides in Lenoir City, Tennessee, and was appointed to the board in June 2017. He currently serves as chair of the EM SSAB in Oak Ridge.

Bonnie Shoemaker (Anderson County). Ms. Shoemaker retired in 2008 after 34 years at the DOE East Tennessee Technology Park and ORNL working in a variety of capacities, including chemical laboratory analyst, environmental compliance specialist, plant shift superintendent, emergency management specialist, and engineering technician. She is the recipient of two awards for operations and technical support in environmental compliance and emergency management. Ms. Shoemaker received her B.S. in Biology from UT. She has an interest in environmental and public health issues. Ms. Shoemaker is a resident of Clinton, Tennessee. She was appointed to the board in June 2017 and currently serves as chair of the EM Stewardship Committee for the EM SSAB in Oak Ridge.

Fredric Swindler (Roane County). Mr. Swindler retired in 2013 as vice president and consultant for quality assurance and regulatory affairs with IsoRay Medical, Inc. in Richland, Washington. He occasionally provides consulting services with Vivos, Inc., a medical device manufacturer in Richland, Washington (no DOE or EM work). He was previously employed as a vice president for quality assurance and regulatory affairs with two other medical manufacturing companies. Mr. Swindler received a B.S. in Biological Engineering from Rose Hulman Institute of Technology in Terre Haute, Indiana, and an M.B.A. from the University of Evansville, Indiana. He is a senior member of the American Society for Quality and has an interest in environmental and public health issues. Mr. Swindler is a resident of Rockwood, Tennessee and was appointed to the board in July 2016.

John Tapp (Knox County). Dr. Tapp is a civil and environmental engineer with nearly 50 years of experience in all areas of environmental protection and restoration, including private and public utility management, civil and environmental engineering, strategic planning, budgeting, and project development. Dr. Tapp has recently worked for Electric Utility Disaster Specialists, Inc. as an independent technical assistance consultant for the Federal Emergency Management Agency in the water and wastewater field with deployments to the U.S. Virgin Islands and the California Camp Wildfire. Prior work included HDR-ICA Engineering, where he provided consulting in a broad range of areas, including environmental permitting and interaction with state and federal regulatory agencies, and work with the Kentucky Infrastructure Authority, where he managed the statewide planning effort for the Authority. Dr. Tapp spent most of his career as a founding partner in Commonwealth Technology, an environmental and engineering

consulting firm, and previously worked with the Kentucky Division of Water, the Environmental Protection Agency, and the U.S. Public Health Service. Dr. Tapp received his B.S. and M.S. degrees in Civil Engineering and his Ph.D. in Agricultural Engineering from the University of Kentucky. Dr. Tapp has an interest in environmental and economic development issues. He is a member and past president of the Kentucky-Tennessee Water Environment Association, a member of the Water Environment Federation, the Karns Community Club, and the Enhance Powell Committee. Dr. Tapp lives in Powell, Tennessee, and was appointed to the board in June 2017.

Thomas Tuck (Knox County). Mr. Tuck is a retired 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. Mr. Tuck received a B.S. in Business and Marketing from University of Tennessee (UT) and is a Certified Banker through the School of Banking of the South. Mr. Tuck is a member of the board of directors for local organizations including the Oak Ridge Chamber of Commerce, Oak Ridge Heritage and Preservation Association, and the East Tennessee Economic Council. He is a member of the Y-12 Community Relations Council. He is interested in civic and local business issues. He is a resident of Knoxville, Tennessee, and was appointed to the board in December 2020.

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

Zachary Wilkins (Morgan County). Since November 2019, Mr. Wilkins has been a senior industrial hygiene technician with DOE subcontractor Value Added Solutions, Inc., which provides professional services to support the cleanup and reindustrialization efforts at the Oak Ridge site. From August 2018 to November 2019, he was a laborer for United Cleanup Oak Ridge, LLC (UCOR). Mr. Wilkins received an A.A.S. in Environmental Health from Roane State Community College. He is interested in environmental issues and is a resident of Wartburg, Tennessee, and was appointed to the board in December 2020.