

# Oak Ridge Site Specific Advisory Board Monthly Meeting



Wednesday, May 12, 2021, 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.

## Agency Liaisons

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



*Jay Mullis*

John Arthur (Jay) Mullis II is the Manager of the Department of Energy's Oak Ridge Office of Environmental Management (OREM). He was selected to this position in November 2017. He is responsible for safely executing the environmental cleanup of the 32,400-acre Oak Ridge Reservation.



*David Adler*

David Adler serves as the Deputy Designated Federal Officer for ORSSAB. He is director of the Quality and Mission Support Division for the Oak Ridge Office of Environmental Management.



*Melyssa Noe*

Melyssa Noe serves as the board's Alternate Deputy Designated Federal Officer. She is branch chief of program support in the Quality and Mission Support Division for OREM.



*Connie Jones*  
*EPA*

Constance (Connie) Jones represents Environmental Protection Agency. She is part of the Superfund Division in the agency's Region 4 Office, which covers the Southeast.



*Kristof Czartoryski*  
*TDEC*

Kristof Czartoryski is an environmental consultant with the Tennessee Department of Environment and Conservation. He is part of the agency's Division of Remediation in Oak Ridge.

## ENVIRONMENTAL MANAGEMENT SITE-SPECIFIC ADVISORY BOARD IN OAK RIDGE

### BIOGRAPHIES

**Chris Hampel (Roane County).** Mr. Hampel owns and operates a small business, Pressure Washing Solutions, which he formed in 2016. He previously worked at Energy Solutions, which is a contractor to 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 minority and business issues. He is a resident of Kingston, Tennessee, and was appointed to the board in December 2020.

**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 owned her own business, 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. She was appointed to the board in July 2019 and currently serves as chair of the EM and Stewardship Committee of the EM SSAB in Oak Ridge.

**\*\*Noah Keebler (Knox County).** As of January 2021, 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 was appointed to the board in July 2019, and is a resident of Knoxville, Tennessee.

**Michelle Lohmann (Knox County).** Ms. Lohmann has been the human resources director for U.S. Cellular since February 2011. Previously, she was the program manager for the University Recruiting and Graduate Education Programs for 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 resides in Knoxville, Tennessee. She was appointed to the board in June 2017 and currently serves as chair of the EM SSAB in Oak Ridge.

**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 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 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 is pursuing a Doctorate in Educational Leadership and Organizational Development, received an M.S. in Behavioral Psychology from Walden University, and a B.S. in Molecular, Cellular, and Developmental Psychology from the University of Colorado. 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 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 for DOE. It provides science, education, workforce development, and health services that include some Oak Ridge EM areas such as decontamination verifications to support cleanup. He received an A.S. in Computer Programming from ITT Technical Institute and is pursuing a B.S. in Business Administration from Tusculum University. Mr. Sharpe is interested in civic and environmental issues. He is a resident of Lenoir City, Tennessee, and was appointed to the board in December 2020.

**Leon Shields (Loudon County).** Mr. Shields is the supervisor for field operations for the Lenoir City Utilities Board in Lenoir City, Tennessee, where he has worked for over 27 years. He is also the owner of Instructional Concepts, which provides training in industrial, public, and private application of firearms, explosives, vehicle extrication, and rescue operations. He is a firearms instructor/deputy for the Loudon County Sheriff's Office, an instructor/third party examiner for the State of Tennessee, a firefighter director with Loudon County Fire Rescue, chairman of the Lenoir City Planning Commission/Board of Zoning Appeals, a commissioner with the Lenoir City Housing Authority/Rural Development, secretary for the Loudon County Regional Board of Zoning Appeals, and a commissioner with the Loudon County Regional Planning Commission. 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. Mr. Shields has an interest in environmental issues. Mr. Shields resides in Lenoir City, Tennessee. He was appointed to the board in June 2017 and currently serves as vice 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 secretary of 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. He 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, EPA, 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. He was appointed to the board in June 2017 and currently serves as vice chair of the EM and Stewardship Committee of the EM SSAB in Oak Ridge.

**Thomas Tuck (Knox County).** Mr. Tuck is a banking executive with TNBANK. He served as president of the bank since 1995 and in March of 2020 transitioned to part-time employment as part of a leadership transition/retirement. Mr. Tuck received a B.S. in Business and Marketing from 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 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. He 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 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. 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.

# CONTENTS

## AGENDA

PRESENTATION MATERIALS — To be distributed prior to or at the meeting.

## CALENDARS

1. May
2. June (draft)

## BOARD MINUTES/RECOMMENDATIONS & MOTIONS

1. February 12, 2020 unapproved meeting minutes
2. March 10, 2021 unapproved meeting minutes
3. Draft Recommendation 248 on OREM FY 2023 Budget Request for discussion
4. EMDF Background Info – Recommendation 240 on Waste Disposal Capacity
5. EMDF Background Info – Response to Recommendation 240 on Waste Disposal Capacity

## REPORTS & MEMOS

1. Incoming Correspondence
2. Ms. Lohmann's notes on EM SSAB Spring Chairs Meeting
3. Public Comments #1 & 2





**Oak Ridge Site Specific Advisory Board**  
**Wednesday, May 12, 2020, 6:00 p.m.**  
DOE Information Center  
1 Science.Gov Way, Oak Ridge, TN 37831  
**AGENDA**

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- I. Welcome and announcements (M. Lohmann) ..... 6:00–6:15
  - II. Comments from federal and state agency representatives  
(J. Mullis, C. Jones, K. Czartoryski) ..... 6:15–6:20
  - III. Presentation: EMDF and Waste Disposal (B. Henry)..... 6:20–6:40  
**Issue Group:** *Lohmann, McCurdy, Perez Shields, Shoemaker, Swindler, Tapp*  
*Members: please inform staff if you wish to join this or any other topic*  
Questions regarding the **presentation/speaker only**..... 6:40–6:50
    - 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)..... 6:50-7:00
    - i. Comments on **other topics or concerns** for DOE or the board – Comments previously submitted will 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, May 17, 2021.*
  - V. Call for additions & motion to approve agenda (M. Lohmann)..... 7:00
    - A. Requests for new action items
    - B. Next meeting – June 9 on Groundwater Remedies at ETP (D. Adler)  
**Issue Group:** *Jones, Lohmann, McCurdy, Samaras, Shields, Shoemaker, Swindler, Tapp*  
*Members: please inform staff if you wish to join this or any other topic*
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- This ends the presentation portion of the meeting – presenters and subject experts may depart*
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- VI. Board Business..... 7:05–7:15
    - A. Motion to Approve: February 12, 2020 Meeting Minutes (B. Shoemaker)
    - B. Motion to Approve: March 10, 2021 Meeting Minutes (B. Shoemaker)
    - C. HQ Charges on Outreach and End-State Cleanup
    - D. Complete issue group signup
  - VII. Responses to recommendations & alternate DDFO’s report (M. Noe) ..... 7:15–7:20
  - VIII. Committee reports ..... 7:20–7:25
    - A. EM/Stewardship (A. Jones/J. Tapp)
    - B. Executive (M. Lohmann)
  - IX. Additions to agenda & closing remarks (M. Lohmann)..... 7:25–7:30
  - X. Adjourn ..... 7:30

Brian Henry was named Y-12's portfolio federal project director in 2016. In this role, he oversees all of the planning and execution for Y-12's current and upcoming cleanup projects, including all decontamination, demolition, and disposal operations. In this role, he is also leading preparations for the Mercury Treatment Facility and the Environmental Management Disposal Facility, two of OREM's largest and most vital near-term capital projects.

Prior to his selection, Henry was OREM's senior project manager for the Environmental Management Disposal Facility, and he also served as the interim portfolio federal project director for Y-12. Before joining OREM, Henry served as the chief of the Reservation Management branch at DOE's Oak Ridge Office, and he also led its Reindustrialization program. Henry has more than 20 years of federal experience working on complex facility and utility projects, including time he spent as a civilian employee for the Navy and the Air Force.

He holds a bachelor's degree in electrical and computer engineering from Tennessee Technological University, and he is a licensed professional engineer in the State of Tennessee.

Presentation to be  
distributed at or prior  
to meeting



# Oak Ridge Site Specific Advisory Board

# May

# 2021

Topic – Budget

| Sunday    | Monday    | Tuesday   | Wednesday  | Thursday  | Friday    | Saturday  |
|-----------|-----------|-----------|--|-----------|-----------|-----------|
|           |           |           |  |           |           | <b>1</b>  |
| <b>2</b>  | <b>3</b>  | <b>4</b>  | <b>5</b><br>Executive<br>Committee meeting<br>4 p.m. (Virtual)       | <b>6</b>  | <b>7</b>  | <b>8</b>  |
| <b>9</b>  | <b>10</b> | <b>11</b> | <b>12</b><br>Board meeting<br>6 p.m. (Virtual)                       | <b>13</b> | <b>14</b> | <b>15</b> |
| <b>16</b> | <b>17</b> | <b>18</b> | <b>19</b>  | <b>20</b> | <b>21</b> | <b>22</b> |
| <b>23</b> | <b>24</b> | <b>25</b> | <b>26</b><br>EM/Stewardship<br>Committee Meeting<br>6 p.m. (Virtual) | <b>27</b> | <b>28</b> | <b>29</b> |
| <b>30</b> | <b>31</b> |           |  |           |           |           |

All meetings will be held virtually until further notice. For information about attending meetings, please email [orssab@orem.doe.gov](mailto:orssab@orem.doe.gov) at least 1 week prior to the scheduled meeting.

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

**DOE Information Center:** (865) 241-4780



## Oak Ridge Site Specific Advisory Board

# June (draft)

# 2021

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

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**Oak Ridge Site Specific Advisory Board  
Recommendation 248: On the FY 2023  
Oak Ridge Environmental Management Program Budget  
Priorities**

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**Background**

Each year the U.S. Department of Energy (DOE) Environmental Management (EM) Program develops its budget request for the fiscal year (FY) two years beyond the current year, including requests from DOE field offices to develop the EM Program budget request to the president.

DOE-EM Headquarters typically issues guidelines to the field offices advising them how much funding they should reasonably expect when developing their FY+2 budget requests. The field offices then brief the public, the regulatory agencies, and the respective site-specific advisory boards and seek input from each regarding budget requests.

On March 10, 2021, the Oak Ridge Environmental Management (OREM) program presented on its FY 2021 budget formulation process to the Oak Ridge Site Specific Advisory Board (ORSSAB). The meeting was attended by several EM portfolio project directors who gave specifics on their projects. This presentation provided content and discussions that ORSSAB used to draft its recommendations.

**Discussion**

In creating its recommendations for the FY 2021 OREM budget, ORSSAB focused on general near-term and long-term cleanup priorities identified by OREM:

- Complete ETTP cleanup
  - Complete all remedial action consistent with CERCLA agreements
  - Fully Implement reindustrialization and historic preservation activities at ETTP
- Disposition ORNL uranium-233 inventory
  - Complete uranium-233 direct disposition campaign
  - Conduct down-blending operations and dispose of remaining uranium-233 inventory
- Disposition ORNL transuranic waste inventory
  - Complete disposition of transuranic debris waste
  - Complete construction of the Sludge Processing Facility
- Address Y-12 mercury contamination
  - Ensure proper planning for future mercury cleanup
  - Reduce mercury in surface water exiting Y-12

Project-specific objectives provided additional details for discussions that took place at the March 24, 2021, EM & Stewardship Committee meeting. The board referred to the [OREM 10-year Program Plan](#), the [EM Strategic Vision: 2021–2031](#), the current [EM Budget Request](#), and the board's [previous Recommendations](#) for additional guidance on budget recommendations.<sup>1</sup>

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<sup>1</sup> All documents are available on [www.energy.gov/orem](http://www.energy.gov/orem) or [www.energy.gov/orssab](http://www.energy.gov/orssab).

**Recommendations**

ORSSAB supports OREM's Program Plan and recommends fully funding the activities that are currently supported by that Plan for FY 2023. In addition, ORSSAB has identified the following priorities for Oak Ridge Reservation cleanup.

The board recommends that the FY 2023 OREM budget request reflect adequate funding to maintain or accelerate these projects. In addition, when extra funds from suitable plus-ups and savings become available, we recommend that these funds be targeted for the following projects.

1. Complete transfer of all applicable land parcels at ETPP for productive purposes. Continue working with community partners to fully realize the economic development potential of reindustrialization after transfer.
2. Provide adequate funding to construct and operate the urgently needed new onsite disposition facility to allow uninterrupted cleanup progress at Oak Ridge National Laboratory (ORNL) and Y-12 National Security Complex (Y-12).
3. Increase funding where possible to ensure the Mercury Treatment Facility meets the operational date of 2025 as presented to the community and ORSSAB. In addition, consider using plus-ups or surplus funds to upgrade equipment and technology that may have improved since the original schedule was developed.
4. The expansion of ORNL's Aquatic Ecology Laboratory provides a vital resource to the EM complex. Future requests should continue funding support for research into mercury and methyl-mercury pollution and prioritize designing and testing new and improved remediation technologies.
5. Provide adequate funds to maintain or upgrade infrastructure to ensure safe transportation of waste from cleanup projects to disposal.



## Oak Ridge Site Specific Advisory Board Recommendation 240: On the Proposed Environmental Management Disposal Facility at the U.S. DOE Oak Ridge Reservation

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### **Background**

Much of the Manhattan Project legacy waste for which the Department of Energy (DOE) Oak Ridge Environmental Management (OREM) program is responsible falls under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (also known as the Superfund Act), which is a federal law regulating the cleanup of designated sites contaminated with hazardous waste.

The DOE Oak Ridge Reservation (ORR) is home to three large industrial sites with numerous buildings, burial grounds, soils, and other contaminated assets for which OREM has responsibility. CERCLA wastes from OREM cleanup activities at these sites [the East Tennessee Technology Park (ETTP), Oak Ridge National Laboratory (ORNL), and the Y-12 National Security Complex (Y-12)] are in large part disposed of in an existing OREM landfill known as the Environmental Management Waste Management Facility (EMWMF) near Y-12.

EMWMF is a dedicated disposal facility in Bear Creek Valley that receives low-level radioactive waste, hazardous waste regulated under the Resource Conservation and Recovery Act of 1976 (CERCLA), waste regulated under the Toxic Substances Control Act of 1976, and mixed wastes generated from the cleanup programs at the ORR conducted under CERCLA. It is an engineered facility with six cells, a 2.18 million cubic yards capacity, and a 43-acre footprint, under final cover. EMWMF has been actively accepting ORR CERCLA waste since 2002, but its capacity to accept waste will be exhausted by approximately 2023.

In December 2010, DOE first announced that additional CERCLA waste disposal capacity on the ORR would be necessary because of the expansion of OREM scope in the years since the construction of EMWMF began. This need for additional capacity was initially primarily due to two factors: (1) the availability of American Recovery and Reinvestment Act funds that allowed OREM to accelerate clean-up projects within its scope at that time and (2) expansion of the OREM program in recent years to include the removal of outdated facilities at ORNL and Y-12. DOE estimates that additional capacity for approximately 2.2 million cubic yards of waste will be needed to complete ORR cleanup effort as set forth in the current plan.

The following alternatives were considered when evaluating waste disposal capacity for ORR:

- *No Action* — This alternative is a CERCLA requirement and is not expected to be selected.
- *Offsite Disposal* — This alternative would require the cross-country transport of waste to facilities in Utah and Nevada by truck and rail operations.
- *Hybrid Disposal* — This alternative would include a combination of a small onsite facility with additional offsite disposal at existing facilities.
- *Onsite Disposal* — This alternative is estimated to save \$800 million versus offsite disposal. Three options for onsite disposal are under consideration.

Onsite options require the selection of a new landfill location. The initial screening process for onsite alternatives resulted in three sites in Bear Creek Valley being the most viable. Factors included topography and hydrology, available capacity, and intended future land use of the sites.



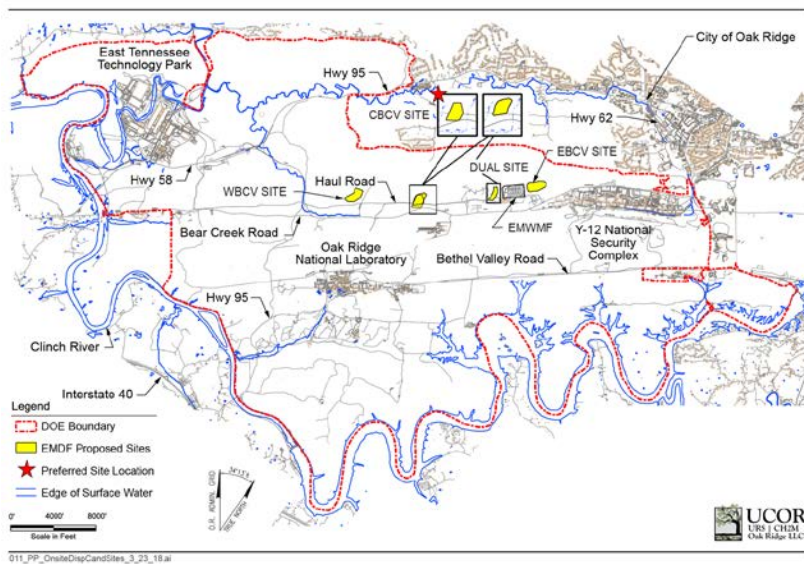


Figure 1 Proposed sites for EMDF

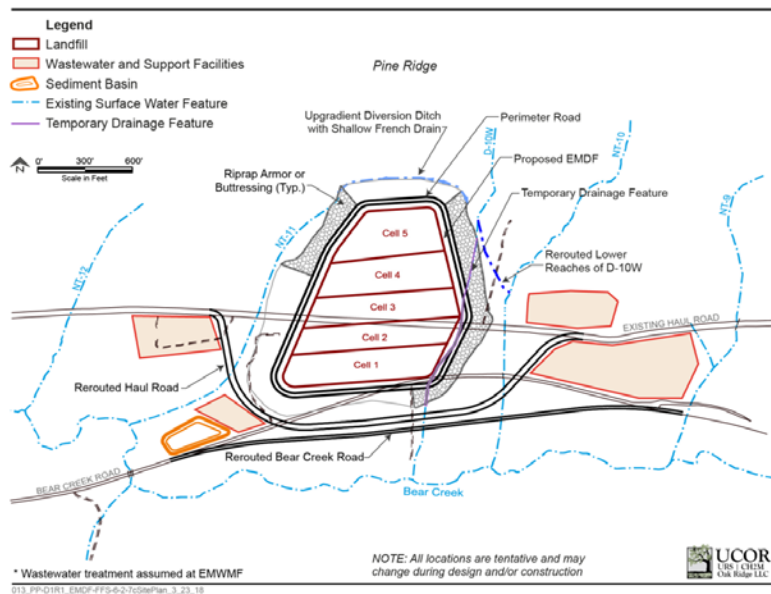


Figure 2 Concept design of the Central Bear Creek Valley Site

## Discussion

The Oak Ridge Site Specific Advisory Board (ORSSAB) began discussing the need for additional CERCLA waste disposal capacity on the ORR at its December 2010 Environmental Management/Stewardship Committee meeting and has continued to follow developments and correspondence among the three agencies since that time.

- In June 2011, the board issued Recommendation 200: Recommendation on the Decision Process for Siting a Second CERCLA Waste Disposal Facility.<sup>2</sup> The recommendation suggested early involvement of state and local governments and area citizens in the process of selecting a site for an additional waste disposal facility. It asked DOE to carefully evaluate future disposal needs and lifecycle costs and look for ways to reduce its disposal needs. It also recommended that DOE commit to additional payments to the State of Tennessee for long-term post-closure stewardship if EMDF is built.

Development of a new disposal area, named the Environmental Management Disposal Facility (EMDF), has been proposed by DOE to the Tennessee Department of Environment and Conservation (TDEC) and the Environmental Protection Agency (EPA). The *Remedial Investigation/Feasibility Study for CERCLA Waste Disposal*, (DOE/OR/01-2535&D5), was prepared in 2012 to develop, screen, and evaluate alternatives for waste disposal against CERCLA criteria.<sup>1</sup> The report was first submitted to TDEC and EPA for review in September 2012. The latest version, which includes four site options/locations, was submitted in February 2017 and EPA and TDEC submitted comments to DOE. DOE is responding to these comments and currently conducting a field study at the identified preferred site, which includes groundwater, surface water, and soil sampling.

DOE, EPA, and TDEC are working together to issue a Proposed Plan that will be available to the public for input (currently estimated for summer 2018). Additional actions will need to be taken by the agencies, including final agreements and evaluation of the related studies, before a final record of decision (ROD) can be signed.

- In May 2014, ORSSAB issued Recommendation 223: Recommendations on Additional Waste Disposal Capacity on the Oak Ridge Reservation.<sup>2</sup> It asked DOE to continue planning for an additional onsite disposal facility that would have sufficient capacity to accept all appropriate future generated waste from DOE activities through cleanup of the ORR. It made general recommendations as to safety and siting, and it restated the board's position on long-term post-closure stewardship.
- In December 2016 ORSSAB issued Recommendation 233: Recommendations on the Proposed Environmental Management Disposal Facility at the U.S. DOE Oak Ridge Reservation.<sup>2</sup> It asked DOE to ensure a trust fund for long term-stewardship is established for EMDF similar to that for EMWMF. DOE responded that continuation of the concept of a trust fund for EMDF similar to that for EMWMF was contingent upon the state accepting such an agreement. DOE's response also said it would be responsible for long-term stewardship of the facility, either through establishment of a trust fund with the state or independently.
- In April 2018, DOE provided ORSSAB with an update on ongoing efforts to assure waste disposal capacity for ORR at its monthly board meeting and at its Environmental Management/Stewardship Committee meeting. The following recommendations were generated from discussions at those meetings.

### **Recommendations**

ORSSAB supports onsite disposal of OREM CERCLA wastes that meet the onsite waste acceptance criteria. ORSSAB understands that in regards to stewardship the long-term stewardship agreement for EMWMF only included monitoring and maintenance and the state does not wish to participate in a similar agreement for EMDF. We wish to provide recommendations that have become relevant given the revisions of the remedial investigation/feasibility study and evolving discussions among DOE, TDEC, and EPA. In sum, our recommendations are as follows:

1. **Funding:** Ensure that funding is secured and prioritized to provide a reasonable period of overlap no less than two years operation of the proposed EMDF and the existing EMWMF given the fact that the EMWMF is currently at 75 percent capacity.
2. **Community Engagement:** Although communication with and to the community is part of the CERCLA process, emphasis should be placed on direct and iterative contact with the residential communities that are near the proposed EMDF site. Ideally, this should involve scheduled informational meetings with adjacent communities to ensure visibility regarding proposed plans, while allowing residents the opportunity to learn about the plans, and have their voice heard regarding their concerns. We recommend these meetings include the planning and status of the design and construction efforts and final timelines for completion of each critical phase. These informational meetings should be scheduled to take place as early as possible in the planning stages to adequately address community/public concerns and that meetings are scheduled in sufficient numbers, times and places to allow all interested parties to attend. Also, consideration should be given to publicizing dates, times and locations of the meetings to ensure the public is aware they are taking place.
3. **Expansion/Additional Capacity:** During the preparation of the Proposed Plan, the ROD and the conceptual and design phases of the EMDF, DOE should evaluate and ensure that the facility will allow for an additional capacity in case that the original capacity is not adequate.
4. **Monitoring:** Actual hydrologic conditions in the proximity of the proposed site for EMDF should be evaluated to mitigate or eliminate any deleterious effects later during construction and operation. Additionally, the evaluation process should include specific lessons learned from the current facility and results from on-going site investigation/sampling. The evaluation process should be completed before the design phase is finalized.

5. **Budget for Future Monitoring and Maintenance of the Completed Facility:** Funding should be allocated and prioritized for the post-construction phase that includes future monitoring and functioning of the facility for requirements stipulated in the ROD and other relevant documents.
- a. Seek a mechanism for either DOE or a public-private partnership that would be responsible for the lifetime of the EDMF to provide scheduled periodic maintenance to avoid deterioration of the facility once the facility is at capacity.
  - b. Devise a monitoring and maintenance plan prior to closure of EMDF.

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<sup>1</sup> Document available at the DOE Information Center, [doeic.science.energy.gov](http://doeic.science.energy.gov).

<sup>2</sup> Document available at [energy.gov/orssab](http://energy.gov/orssab).



## Department of Energy

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

October 31, 2018

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

Dear Mr. Wilson:

### **RESPONSE TO THE LETTER DATED AUGUST 28, 2018, RECOMMENDATION 240: ON THE PROPOSED ENVIRONMENTAL MANAGEMENT DISPOSAL FACILITY**

Thank you for your August 28, 2018, letter with a recommendation regarding the proposed Environmental Management Disposal Facility (EMDF). The U.S. Department of Energy (DOE) response to the five items in the recommendation are given below:

1. **Funding:** Ensure that funding is secured and prioritized to provide a reasonable period of overlap no less than two years operation of the proposed EMDF and the existing Environmental Management Waste Management Facility (EMWMF) given the fact that the EMWMF is currently at 75 percent capacity.

**Response:** Within its planning budgets and scheduling of future cleanup scope, which includes providing for a future onsite waste disposal facility (EMDF) to replace the EMWMF, DOE has accounted for the need to begin operation of the EMDF two years prior to attaining capacity in the EMWMF. DOE submits a yearly budget estimate to the Office of Management and Budget that reflects full compliance with all of our environmental commitments, as required by Executive Order 21088, entitled *Federal Compliance with Pollution Control Standards*. This budget submittal has the prioritization needs of the Oak Ridge Office of Environmental Management (OREM) considered, and securing the funding is part of the submittal process.

2. **Community Engagement:** Although communication with and to the community is part of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process, emphasis should be placed on direct and iterative contact with the residential communities that are near the proposed EMDF site. Ideally, this should involve scheduled informational meetings with adjacent communities to ensure visibility regarding proposed plans, while allowing residents the opportunity to learn about the plans, and have their voice heard regarding their concerns. We recommend these meetings include the planning and status of the design and construction efforts and timelines for completion of each critical phase. These informational meetings should be scheduled to take place as early as possible

**RESPONSE TO THE LETTER DATED AUGUST 28, 2018, RECOMMENDATION 240:  
ON THE PROPOSED ENVIRONMENTAL MANAGEMENT DISPOSAL FACILITY**

in the planning stages to adequately address community/public concerns and that meetings are scheduled in sufficient numbers, times, and places to allow all interested parties to attend. Also, consideration should be given to publicizing dates, times, and locations of the meetings to ensure the public is aware they are taking place.

**Response:** OREM is committed to conducting all of the robust communication efforts listed in its EMDF Community Outreach Plan, which was approved by the U.S. Environmental Protection Agency and the Tennessee Department of Conservation and Environment. At each stage of this project, OREM has fulfilled, and even exceeded, those outreach commitments to ensure full public awareness about this important project.

The public comment period for the EMDF Proposed Plan was originally scheduled to run from September 10 to October 26, 2018, but OREM extended the deadline to December 10, 2018, to ensure all interested parties have adequate time to review and provide comments on the document.

Consistent with your recommendation requests, OREM scheduled information sessions immediately after the EMDF Proposed Plan was released to begin dialogue and interactions with residents and stakeholders. We hosted the first information session on September 13, 2018, at the DOE Information Center and the second information session on October 2, 2018, at the East Tennessee Economic Council Building. We also supported a third information session that was hosted by the Sierra Club at the Tennessee Department of Conservation and Environment office on October 11, 2018. Additionally, OREM is hosting a formal public meeting about the project on November 7, 2018, at the Y-12 New Hope Center.

OREM has taken numerous steps to ensure the community is aware of every opportunity to learn more about the project and have their voice heard. Specifics about the information sessions and public meeting have been posted in the Knoxville News Sentinel, The Oak Ridger, and Roane County News. Details have also been available on the OREM homepage and social media accounts. OREM also sent out more than 15,000 mailers to every household in Oak Ridge inviting them to the public meeting on November 7, 2018.

The information sessions have been very beneficial. Participants were able to obtain valuable information from posters, fact sheets, and speaking with all of the project managers associated with the EMDF. Federal and contractor personnel were able to answer all questions from the attendees directly, share project timelines, and inform them of the opportunities and methods to share their input. Those sessions resulted in multiple news stories about the project, which enabled OREM to connect with local organizations interested in learning more about the EMDF.

**RESPONSE TO THE LETTER DATED AUGUST 28, 2018, RECOMMENDATION 240:  
ON THE PROPOSED ENVIRONMENTAL MANAGEMENT DISPOSAL FACILITY**

The Environmental Quality Advisory Board and Tennessee Citizens for Wilderness Planning each requested and received tours of the proposed EMDF site during

OREM has conducted outreach for this project in many other ways and has provided briefings to local officials and community organizations and presentations at local, regional, and national meetings on the topic. Most recently, we extended invitations to the City of Oak Ridge and Roane County leadership as well as all members of the Oak Ridge City Council to receive the EMDF briefings and tours. OREM is also discussing this topic at the November Oak Ridge Site Specific Advisory Board meeting, which includes a tour of the site the following week. This public meeting provides another opportunity for the community to learn about the project, ask questions, and share opinions.

- 3. Expansion/Additional Capacity:** During the preparation of the Proposed Plan, the Record of Decision (ROD), and the conceptual and design phases of the EMDF, DOE should evaluate and ensure that the facility will allow for an additional capacity in case the original capacity is not adequate.

**Response:** DOE has included in all its calculations throughout the Remedial Investigation/Feasibility Study and Proposed Plan to date, a 25% uncertainty factor (increase) in waste volumes projected for disposal in an onsite facility. DOE will continue to carry this 25% increase/uncertainty factor throughout the ROD and design phases for the future EMDF.

- 4. Monitoring:** Actual hydrologic conditions in the proximity of the proposed site for the EMDF should be evaluated to mitigate or eliminate any deleterious effects later during construction and operation. Additionally, the evaluation process should include specific lessons learned from the current facility and results from ongoing site investigation/sampling. The evaluation process should be completed before the design phase is finalized.

**Response:** DOE conducted a Phase 1 characterization effort at the Central Bear Creek Valley site (the proposed site for the EMDF) in early 2018. The piezometers installed during this campaign continue to be monitored and planned to be monitored for a one year period. Additionally, a Phase 2 characterization effort was recently initiated in which 14 new piezometers are being installed to obtain hydrologic information (as well as seismic analyses and soil analyses); these piezometers will also be monitored for an extended period of time. The data obtained from these sample points are being evaluated (evaluation will be considered complete once the full one year of data is obtained), used to inform design as it progresses into the preliminary stage, and will be used as a basis for final design as well.

**RESPONSE TO THE LETTER DATED AUGUST 28, 2018, RECOMMENDATION 240:  
ON THE PROPOSED ENVIRONMENTAL MANAGEMENT DISPOSAL FACILITY**

Lessons learned from the existing facility are also being considered as design progresses.

**5. Budget for Future Monitoring and Maintenance of the Completed Facility:** Funding should be allocated and prioritized for the post-construction phase that includes future monitoring and functioning of the facility for requirements stipulated in the ROD and other relevant documents.

- a. Seek a mechanism for either DOE or a public-private partnership that would be responsible for the lifetime of the EMDF to provide scheduled periodic maintenance to avoid deterioration of the facility once the facility is at capacity.

DOE will be responsible for the EMDF periodic maintenance and monitoring, as well as any unscheduled maintenance of the facility that may be necessary once the facility has been closed. The funding necessary to carry out these responsibilities has been included in the DOE long-term stewardship estimates. The mechanism by which this funding would be made available will be managed through the DOE Office of Legacy Management.

- b. Devise a monitoring and maintenance plan prior to closure of the EMDF.

DOE Order 435 requires a monitoring and maintenance closure plan be developed for the facility. Additionally, CERCLA requirements, as Applicable or Relevant and Appropriate Requirements, stipulate the need for planning and conducting long-term monitoring.

CERCLA also requires a five year review of all remedies so long as the hazardous substances remain on the site above levels that permit unrestricted use and unlimited exposure. The purpose of the five year review is to ensure that the remedy performance remains protective, and implement any corrective action if the remedy is determined to not be protective. There are, therefore, many mechanisms regarding the requirements to plan and carryout long-term management of the facility, and to maintain its protectiveness of the public and environment in perpetuity.

Mr. Dennis Wilson


-5-

October 31, 2018

**RESPONSE TO THE LETTER DATED AUGUST 28, 2018, RECOMMENDATION 240:  
ON THE PROPOSED ENVIRONMENTAL MANAGEMENT DISPOSAL FACILITY**

Thank you for your continued focus and attention to support our important environmental cleanup mission. If you have any questions or if we can be of further assistance, please contact Brian Henry at 241-8340.

Sincerely,



John A. Mullis II  
Manager

cc:

Carl Froede, EPA Region 4  
Connie Jones, EPA Region 4  
Colby Morgan, TDEC, Oak Ridge  
Randy Young, TDEC, Oak Ridge  
Dave Adler, EM-94  
Mike Koentop, EM-90  
Melyssa Noe, EM-942





*Many Voices Working for the Community*

# Oak Ridge Site Specific Advisory Board

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## *Monthly Meeting of the Oak Ridge Site Specific Advisory Board*

### **DRAFT February 12, 2020 Meeting Minutes**

The Oak Ridge Site Specific Advisory Board (ORSSAB) held its monthly meeting on Wednesday, February 12, 2020, at the DOE Information Center, 1 Science.gov Way, Oak Ridge, TN, beginning at 6 p.m. Copies of referenced meeting materials are attached to these minutes. A video of the presentation portion of the meeting was made and is available on the board's YouTube site at [www.youtube.com/user/ORSSAB/videos](http://www.youtube.com/user/ORSSAB/videos).

#### **Members Present**

Leon Baker  
Andrea Browning  
Richard Burroughs  
Bill Clark  
Amy Jones  
Noah Keebler

Shell Lohmann, Chair  
Harriett McCurdy  
Georgette Samaras  
Leon Shields, Vice Chair  
Bonnie Shoemaker,  
Secretary

Fred Swindler  
John Tapp  
Rudy Weigel  
Robert Whitaker

#### **Members Absent**

Marite Perez

Brooke Pitchers

Dennis Wilson<sup>1</sup>

<sup>1</sup>Third consecutive absence

#### **Liaisons, Deputy Designated Federal Officer, and Alternates Present**

Dave Adler, ORSSAB Deputy Designated Federal Officer (DDFO), DOE-OREM  
Melyssa Noe, ORSSAB Alternate DDFO, OREM  
Kristof Czartoryski, Tennessee Department of Environment and Conservation (TDEC)  
Connie Jones, U.S. Environmental Protection Agency (EPA)

#### **Others Present**

Jim Bolon, Isotek Systems, LLC  
Shelley Kimel, ORSSAB Support Office  
Sara McManamy-Johnson, ORSSAB Support Office  
Nathan Felosi, OREM  
Steven Clemons, OREM  
Craig VanTrees, EPA  
Cathy Amoroso, EPA  
Roger Petrie, UCOR

Nine members of the public were present.

### **Liaison Comments**

**Mr. Adler** – Mr. Adler reminded attendees that the public opening for the K-25 History center is scheduled for Feb. 27. He added that work would begin on tearing down significant components of the centrifuge at the East Tennessee Technology Park (ETTP).

**Mr. Czartoryski** – None.

**Ms. Connie Jones** – Ms. Jones told members that EPA has a new management chain within EPA, the Superfund and Emergency Management Division, directed by Carol Monell. She said the new Branch Chief is Glen Adams, who used to be over the Superfund Support Section. Ms. Jones said her new immediate supervisor is Section Chief Cathy Amaroso, and she also introduced new Remedial Project Manager Caig VanTrees. Ms. Jones also added that she toured ETTP earlier that day and she commented on the significant changes at the site.

### **Presentation**

Mr. Shields introduced Jim Bolon, president of Isotek Systems, LLC, and presenter for the evening's topic on Processing U-233 Materials.

Mr. Bolon gave members an overview of Isotek System LLC and their task of securing, processing, and dispositioning uranium-233 (U-233) inventory stored at Building 3019, including highlights of the U-233 project chronology from when DOE first awarded the contract to Isotek in October 2003.

He next discussed the varieties of materials identified for disposition and what types of processing are required to disposition each type, as well materials that may be reused. Additionally, he discussed the facilities where Isotek is located and gave overviews of each building's history.

Mr. Bolon then told members about the public-private partnership between DOE, Isotek, and TerraPower, in which rare thorium isotopes are recovered during the U-233 process and then used in cancer research, and he showed a video that provided an overview of the extraction process (see attached materials). The thorium would then be used to generate actinium-225, a necessary component for targeted alpha therapy. He next showed a video that provided an overview of targeted alpha therapy (see attached materials).

He told members that Isotek began glovebox operations in October and has completed processing six cans of material – extracting nearly a quarter of a gram of thorium – and he gave a more detailed overview of the process.

Next, he discussed Isotek's preparations for hot cell processing, which is the processing of the more highly radioactive materials and extraction of thorium.

Mr. Bolon added that Isotek tries to utilize local business suppliers as much as possible to try to keep money in the local community, and he listed the various suppliers, the components or services they provide, and their location.

### **After the presentation, board members asked the following questions:**

- Mr. Tapp asked for clarification on the number of doses ORNL generates, how long it takes to use the doses, and whether there is another source.
  - Mr. Bolon said ORNL can generate about 4,000-5,500 doses of actinium per year, but

they only have a quarter of a gram of thorium. He said Isotek will ultimately deliver more than 40 grams of thorium to TerraPower, so they will ultimately be able to use that make more than half a million doses of actinium for targeted alpha treatment.

Mr. Bolon said work is underway to develop an accelerator to generate thorium, so this project would serve as a supplement to that.

- Mr. Baker asked how long the extraction process of thorium to actinium takes.
  - Mr. Bolon said Isotek's extraction portion – extracting the thorium from the uranium – takes days, and he thinks the TerraPower portion of the process – extracting the actinium from the thorium – takes a similar amount of time.
- Mr. Baker asked what the average exposure to workers is.
  - Mr. Bolon said it's not zero, but it's in the singular millirem range, and he described the protection measures in place.
- Ms. Browning asked for clarification on the number of types of cancers being targeted with this treatment option.
  - Mr. Bolon said there's a number of different types.
- Mr. Adler commented on the importance of this effort to the EM program. He said Building 3019 needs to be de-inventoried to begin cleanup in adjacent areas. Additionally, he said removing the material will allow ORNL to reduce it's security posture. He then asked Mr. Bolon how long until Building 3019 is cleaned out, based on current projections.
  - Mr. Bolon said possibly third or fourth calendar quarter of 2025.
- Mr. Weigel asked how much longer Isotek will be able to continue to accept the Molten Salt Reactor Experiment (MSRE) traps if they continue to be accepted past the 2025 time frame.
  - Mr. Adler said he was sure there would be a plan in place before that. OREM's Nathan Felosi said there are plans in place for improvements to MSRE so ideally traps will not be necessary.
- Ms. McCurdy asked where the employees are hired from.
  - Mr. Bolon said many employees are hired from competitors, from DOE environments, or from commercial nuclear, and some are trained in-house using a program that meets DOE requirements.
- Mr. Clark asked if thorium is a naturally occurring element.
  - Mr. Bolon said there are some naturally occurring isotopes, but this particular isotope is man-made.
- Mr. Weigel asked what the comparison is between Isotek's dosages received versus allowable standards within the DOE concept.
  - Mr. Bolon said Isotek set an administrative control limit of 500 millirems per worker per year. He said the federal guidelines allow 5,000 millirems per worker 2-3.

### Questions from the Public

- Roger Macklin said he had corresponded several years ago with Dr. Barry Allen, an expert in medical physics, and at Mr. Macklin's request, Dr. Allen sent a letter to DOE's Brian Dementia that request DOE investigate capturing thorium from the uranium onsite. Mr. Macklin asked to submit a copy of that letter into the record (see attachment), and he commended DOE and Isotek for this project.
- Luther Gibson said the Defense Nuclear Safety Board (DNSB) sent a letter indicating a safety analysis of this project indicated different release value was being used from that of the DOE handbook. Did Isotek receive that letter and address that?
  - Mr. Bolon said that letter was received and addressed. He said DOE agreed with the approach Isotek has taken. He said the DNSB has taken an extraordinarily conservative view, but what Isotek has presented still maintains the safety envelope of the facility and keeps the workers safe.
- Bob Hatcher asked how the decision was made to work on a glovebox scale versus scaling up to process more quickly.
  - Mr. Bolon said increasing the scale brings more materials into the facility and it brings along with it two major challenges: 1) increased materials would require increased security posture, which would increase cost and effort; 2) it would require the design and construction of systems to accommodate those materials, and that would increase the cost and timeline. He said in the hot cells, they will only bring over one can of material at a time. He said it's to keep safety and security risks to a minimum.

### Public Comment

- Luther Gibson commented about the announcement of the draft Request for Proposal (RFP) for the Oak Ridge Reservation. He next he suggested a half-day workshop to discuss the ETTP groundwater feasibility study. He said it is one of the decreasing number of remaining opportunities to look at what long-term stewardship will look like at ETTP. He next discussed the recently released Presidential budget and what it means for ETTP.
  - Mr. Adler said regarding the RFP, there are plans in place to ensure the work will continue in an uninterrupted fashion. Regarding groundwater feasibility study, he said DOE will make sure there are plenty of opportunities for people to understand the feasibility study. Lastly, regarding the Presidential budget, Mr. Adler said the numbers released are similar to those of previous years.

### Board Business/Motions

1. Ms. Lohmann asked for a motion to approve the meeting agenda.
  - a. **2/12/20.1 Motion to approve the agenda**  
Motion made by Mr. Shields and seconded by Mr. Swindler. Motion passed unanimously.

2. Ms. Shoemaker presented the November 13, 2019 meeting minutes and asked for a motion to approve.

**a. 2/12/20.2 Motion to approve November 13, 2019 meeting minutes**

Motion made Tapp and seconded Jones. Motion passed unanimously.

**Responses to Recommendations & Alternate DDFO Report**

Ms. Noe said OREM’s Dennis Mayton will attend the next EM & Stewardship meeting to discuss groundwater. She added the draft membership package is at headquarters for review. She also said there will be another tour of the K-25 History Center set up for board members for March as part of the board’s discussion of historic preservation.

**Committee Reports**

Executive – Ms. Lohmann said executives discussed the upcoming Spring Chairs Meeting in Las Vegas. She said there was also discussion about the 2020 Annual Planning Meeting

EM & Stewardship – Ms. Jones said the last meeting, held in October, contained extensive discussion on the ETTP groundwater feasibility study. She added that the committee had discussed, moving forward, issue groups meeting before EM & S meetings to discuss any questions or recommendations they may have. She said the U-233 issue group will meet 15 minutes before the next EMS meeting.

**Additions to the Agenda & Open Discussion**

- Mr. Tapp asked about the K-25 History Center and whether there was any overlap with Oak Ridge’s legacy parks system.
  - Ms. Noe said there may be some overlap, but it will focus specifically to ETTP.

**Action Items**

*Open*  
None

*Closed*  
None

The meeting adjourned at 7:10 p.m.

I certify that these minutes are an accurate account of the February 12, 2020, meeting of the Oak Ridge Site Specific Advisory Board.

Bonnie Shoemaker, Secretary

Michelle Lohmann, Chair

DATE

Oak Ridge Site Specific Advisory Board

ML/sm



*Many Voices Working for the Community*

# Oak Ridge Site Specific Advisory Board

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## *Monthly Meeting of the Oak Ridge Site Specific Advisory Board*

### **DRAFT March 10, 2021 Meeting Minutes**

The Oak Ridge Site Specific Advisory Board (ORSSAB) held its monthly meeting virtually via Zoom on Wednesday, March 10, 2021 at 6 p.m. Copies of referenced meeting materials are attached to these minutes. A video of the presentation portion of the meeting was made and is available on the board's YouTube site at [www.youtube.com/user/ORSSAB/videos](http://www.youtube.com/user/ORSSAB/videos).

#### **Members Present**

Amy Jones  
Noah Keebler  
Shell Lohmann, Chair  
Harriett McCurdy  
Marite Perez

Georgette Samaras  
Michael Sharpe  
Leon Shields, Vice Chair  
Bonnie Shoemaker,  
Secretary

Fred Swindler  
John Tapp  
Tom Tuck

#### **Members Absent**

Leon Baker  
Andrea Browning  
Richard Burroughs

Chris Hampel  
Greg Malone  
Robert Whitaker

Dennis Wilson  
Rudy Weigel  
Zach Wilkins

<sup>1</sup>Third consecutive absence

#### **Liaisons, Deputy Designated Federal Officer, and Alternates Present**

Jay Mullis, Department of Energy, Oak Ridge Office of Environmental Management (DOE-OREM) Manager  
Laura Wilkerson, OREM Deputy Manager  
Alan Stokes, Director, OREM Planning & Execution  
Dave Adler, ORSSAB Deputy Federal Designated Officer, DOE-OREM  
Melyssa Noe, ORSSAB Alternate Deputy Designated Federal Officer (DDFO), OREM  
Kristof Czartoryski, Tennessee Department of Environment and Conservation (TDEC)  
Connie Jones, U.S. Environmental Protection Agency (EPA)

#### **Others Present**

Shelley Kimel, ORSSAB Support Office  
Sara McManamy-Johnson, ORSSAB Support Office  
Roger Petrie, OREM  
Brian Henry, OREM  
Nathan Felosi, OREM

James Daffron, OREM  
Heather Lutz, TDEC  
Sonya Johnson, UCOR  
Conner Ingram, DOE-HQ  
Gary Younger, DOE

Four members of the public were present.

### **Liaison Comments**

**Mr. Mullis** – Mr. Mullis introduced and welcomed new members of the board. Next, he updated members on program highlights, including completion of the core cleanup at East Tennessee Technology Park (ETTP) last fall, marking DOE’s largest completed decontamination and decommissioning (D&D) project and the first time in the world a former uranium enrichment facility has been removed. He said crews at ETTP continue soil remediation and identifying groundwater remediation approaches. He said the majority of the crews that were working at ETTP have transitioned to Y-12 and ORNL, where there were a couple of demolition projects underway, including a hot cell at Building 3026 at ORNL. He said crews completed demolition of one of two large buildings and began work on the second large building in the Biology Complex at Y-12.

He told members DOE has a new Secretary, Jennifer Granholm, who was a two-term governor in Michigan, and a new team is transitioning in. He said a new regulatory framework within TDEC and EPA has been in place for one year. He said that framework has been very helpful in accelerating discussions and resolutions on regulatory topics. He said DOE and EPA had resolved a formal dispute on water discharge and regulatory limits, and he believes DOE is on track to submit a Record of Decision by July, which is the milestone.

**Ms. Jones** – Ms. Jones said the with the Administration change, EPA has a new Acting Regional Administrator while waiting for a permanent Regional Administrator.

**Mr. Czartoryski** – None.

### **Presentation**

Ms. Lohmann introduced Jay Mullis, presenter for the evening’s topic, the FY 2023 Budget.

Mr. Mullis gave members an overview of the federal budget process, which he explained is a three-year process: the current year, the next year, and the following. He said currently DOE is awaiting feedback on the FY 2022 budget, but is also starting the budget build process for FY 2023, the part of the process in which the agencies develop and submit a budget to the Office of Management and Budget (OMB) for their review. He said that FY 2023 budget is the one for which DOE is particularly interested in receiving board input.

Next, Mr. Mullis gave members an overview of DOE’s primary mission areas for environmental cleanup nationally and an overview of recent EM budget figures, both nationally and specific to Oak Ridge. He said Oak Ridge’s cleanup is funded through multiple accounts and explained how funds appropriated are tied to those specific accounts.

Additionally, Mr. Mullis provided an overview of OREM’s program goals articulated a few years ago for future EM activities, which include complete ETTP cleanup, disposition ORNL uranium-233 inventory, disposition ORNL transuranic waste inventory, and address Y-12 mercury contamination. He said these goals set a clear understanding among employees, contractors, and stakeholders for what those goals are.

Mr. Mullis next described the work that had been completed at ETTP, showing images that illustrate the progress made at the site and giving the current status of land transfers and private sector development. He also told

members about the recently opened K-25 History Center and the ways in which it commemorates the accomplishments of Manhattan Project and Cold War-era workers.

After that, Mr. Mullis described OREM's remaining CERCLA obligations at Y-12 and ORNL; at ORNL, that includes removing former research reactors and isotope production facilities, eliminating uranium-233 inventory and shipping transuranic waste. At Y-12, that includes addressing and retrieving mercury in the environment and removing unneeded and contaminated buildings. He told members that several key infrastructure projects are needed to conduct the next phase of cleanup in Oak Ridge, including the Outfall 200 Mercury Treatment Facility, the Environmental Management Disposal Facility (EMDF), a haul road extension, and office and equipment storage areas.

He then went into additional detail about the work being done to address the nation's uranium-233 inventory stored at ORNL, the work being done to eliminate Oak Ridge's inventory of transuranic waste, and the construction underway to build the Mercury Treatment Facility, which he noted is already fully funded. He also gave additional detail about the research underway at the Aquatic Ecology Laboratory at ORNL, as well as the need for additional waste disposal storage capacity.

Mr. Mullis told members that two guiding principles within OREM are to remain investment worthy and to finish what is started. He added that the ETTP demolition was completed four years ahead of schedule and \$80 million under cost, which translated to a cost savings for taxpayers of about \$500 million dollars after factoring environmental liability.

He told members that OREM uses ORSSAB's recommendations. He said members help OREM better understand local perspectives and points of view about cleanup and preferred priorities and recommendations from ORSSAB play a role in OREM's budget request and formulation process.

After the presentation, board members asked the following questions:

- Mr. Tapp asked, with the ROD nearly finished, where is the City of Oak Ridge in terms of support regarding EMDF.
  - Mr. Mullis said he had not heard from the City of Oak Ridge, but it is represented by the State of Tennessee. He said once the ROD is submitted and approved, it goes through a public comment process.

Mr. Adler added that he thinks the City recognizes the need for a landfill for the higher volume low-hazard material that's generated by the cleanup program; he said that type of material is about 90 percent of the material generated. He said what the City is focused on is trying to make sure that the most hazardous materials do not end up in Oak Ridge. He said he does not want to speak for the City, but he believes generally their focus has been on what goes into the cell, as opposed to whether OREM has adequate disposal capacity for the cleanup program.

Mr. Mullis said OREM is also looking at researching additional methodologies and equipment that may be used in Oak Ridge to help address mercury.

- Mr. Sharpe asked what guidelines will be used for the materials when they go into the waste disposal facilities and who will determine the discharge limits.
  - Mr. Mullis said there are limits that will be set through the regulatory process, which will



be used to develop a list of waste acceptance criteria. He said OREM has made a commitment to build an on-site treatment facility for the proposed EMDF.

Mr. Adler added that OREM is currently working with TDEC and the EPA on what goes into the cell and what limits are used to control any water discharges from the cell. He said those systems are already in place for the existing and are currently being refined for what would be appropriate for a new cell. He also noted that no high-hazard material would be accepted at the cell.

### **Questions from the Public**

None.

### **Public Comment**

None.

### **Board Business/Motions**

1. Ms. Lohmann asked for a motion to approve the meeting agenda.
  - a. **3.10.21.1 Motion to approve the agenda**  
Motion made by Mr. Tapp and seconded by Mr. Shields. Motion passed unanimously.
  - b. **3.10.21.2 Motion to approve March 11, 2020 meeting minutes**  
Motion made by Ms. Jones and seconded by Mr. Shields. Motion passed unanimously.
2. Ms. Noe presented the FY 2021 ORSSAB Work Plan/Schedule.
  - a. She told members this work plan picks up where the board left off in 2020. She said there will not be an April meeting due to the EM SSAB Chairs Meeting. The May meeting topic will be EMDF, and June's topic will be groundwater. She said plans for the Annual Planning Meeting are still underway and could potentially be moved to September. She said more information would be available in the next few month. She noted there are no tours planned due to current limits on the number of people allowed in government vehicles.  
  
Ms. Lohmann asked new members to consider signing up to be on issue groups.
3. Ms. Jones opened the floor for nominations for the board's FY 2021 Chair, Vice Chair and Secretary positions.
  - a. Current Chair Shell Lohmann was nominated. With no other nominations, Ms. Lohmann was elected Chair for FY 2021.
  - b. Current Vice Chair Leon Shields and member Chris Hampel were nominated. Mr. Shields received the majority of votes and was elected Vice Chair.
  - c. Current Secretary Bonnie Shoemaker was nominated. With no other nominations, Ms. Shoemaker was elected Secretary.

### **Responses to Recommendations & Alternate DDFO Report**

Ms. Noe said there are no open recommendations, but new member packages have been submitted to headquarters and are going through the review process.

**Committee Reports**

Executive – Ms. Lohmann said the Executive Committee would continue to meet via Zoom for the foreseeable future. She said the committee met the week before and discussed the work plan and the upcoming Chairs Meeting, including the charges the board had been tasked with during the previous Chairs meeting.

EM & Stewardship – Ms. Jones said the next meeting will be held Wednesday, March 24 at 6 p.m. on Zoom. She said elections would be held for committee Chair and Vice Chair, and she reminded members to sign up for issue groups.

**Additions to the Agenda & Open Discussion**

None.

**Action Items**

*Open*

None

*Closed*

None

The meeting adjourned at 7:10 p.m.

I certify that these minutes are an accurate account of the March 10, 2021, meeting of the Oak Ridge Site Specific Advisory Board.



Michelle Lohmann, Chair



Bonnie Shoemaker, Secretary

May 12, 2021

Oak Ridge Site Specific Advisory Board

ML/sm

## SSAB Chair's Meeting Notes 04.20.21

### Todd Shrader (Principal Deputy Assistant Secretary) Comments

#### COVID

- Still working in telework setting for most unless have to be onsite to conduct work
- Some sites doing on-site vaccinations; encouraging all to vaccinate
- Seeing some spikes right now, which seem to align with where national spikes are occurring
- Department issued a federal workforce safety plan; ensuring compliance

#### New Administration

- Strong support for EM mission – much of the discussion will reflect POTUS's agenda including clean energy; not saying no interest in EM – SEC recognizes the cleanup mission as important
- EM is a direct report org to Secretary
- Strong support for Congress in the budget
- Strong support for/in our communities for mission

#### Strategic Vision

- Recently issued for next 10 years; includes priority list
  - WIPP, land transfers, demolitions (biology complex), tank waste mission
  - Not every site is on the list; doesn't mean those sites aren't important – just really succinct re: what has to happen as a priority

#### Headquarters

- Workforce of the future – workforce planning – anticipating retirements, want to build a diverse workforce that better reflects America today, work arrangement flexibility options, etc.
- Anticipating making a lot of progress this year on mission
- Renewed efforts to reach out to tribes

#### Q&A of specific interest

- Interested in understanding how EM feels about the vaccination adoption rates? Any longer-term workforce stability concerns? Seeing some hesitancy but no work impacts foreseen
- Max tele-work: Any assessments re: productivity? Discussion and empirical observations suggest heavy face to face dependent/PPE work has seen some impacts; back office (ex: procurement) may be even more efficient

**Round Robin** – see slides for detail

#### **Update from EMAB Vice-Chair Jack Craig**

- EMAB provides recommendations directly to EM-1; interaction is primarily with Kelly Sneider and Melissa Harris; board is made up on 18 members that is comprised of regulators, education, operations, etc.

- Last year, given charge to look at regulatory requirements and look for efficiencies. 3 subcommittees provided a report to EM (25p); is supposed to be available to the public by next week
- Recommendations include more active collaboration with communities – transparency; utilization of tools to ensure communities and stakeholders have active involvement

## **Public Comment**

NA

## **EM-4 Update – Updates from the Office of Regulatory & Policy Affairs (Mark Gilbertson)**

Items underway:

- Affirmative Action Plan
- Climate Action Plan (May 2021)

COVID 19 – called out same info Todd shared re: continued approach (telework)

Priorities:

- Achieve significant Construction Project Milestones
- Execute Key Projects that Enable the EM Cleanup Mission
- Reduce the EM Complex Footprint
- Award Contracts that Enable Accelerated Progress
- Drive Innovation and Improved Performance

Focus Areas:

- Clear lines of communication
- 2-way information sharing
- Reduce public uncertainty
- Improved decision making and coordination
- Stakeholder support increases

## **EM Strategic Vision: 2021-2031**

Strategic Initiatives

- Safety and security
- Program and Project Management
- Acquisition
- Regulatory/stakeholder Engagement
- Infrastructure
- Next-Gen Workforce
- Innovative Approaches
- Opportunities for Acceleration

## **More Regulatory Specific Activities**

### PFAs (per- and polyfluoroalkyl fluorides)

- In the process of assessing current or past use, as well as monitoring programs at sites to inform policy development
- Actively engaged with fed partners (DOD & EPA) to track research, tech aspects, and potential regulatory actions

### Packing and Transportation

- FY 2020 > Over 1400 1<sup>st</sup> responders trained in 92 courses through the transportation emergency preparedness program (TEPP)
- Issued Nationwide Low-Level Waste (LLW) Treatment Services, providing turnkey services for treatment, processing, and transportation of LLW
- FT 2021 > Finalizing DOE Order 460.2A, Departmental Materials Transportation and Packaging Management

### Regulatory Compliance

- Waste Incidental to Reprocessing > Completed NRC consultation and developing a Final Waste Incidental to Reprocessing Evaluation for Closure of Waste Management Area C at the Hanford Site

### Regulatory | National Environmental Policy Act (NEPA)

- Support NNSA Surplus Plutonium Disposition Program EIS and NE Versatile Test Reactor EIS
- Implementation of CEQ Final Rule

### High Level Radioactive Waste Interpretation

### Waste Isolation Pilot Plant (WIPP)

### Meetings ongoing with:

- National Intergovernmental Groups
- Advisory Boards
- Tribal Communities
  - (DOE Tribal Listening Session (40+ tribes), Biden Admin Tribal Consultation)
  - DOE Tribal Energy Steering Committee
  - Long Term Stewardship

### International

- International Trilateral Collaboration (US-UK-CA)
- Decommissioning workshops
- Research with foreign govts and orgs
- Country-specific agreements to boost info sharing
- Other EM relationships > Korea, Taiwan, France
- CRESIP (Consortium of Risk Eval w Stakeholder Participation)

## **Waste Storage and Reprocessing**

DOE Reprocessing Waste Locations – Hanford, Idaho, Savannah River, West Valley

Operating DOE & Commercial Disposal Facilities (Commercial: US Ecology, Energy Solutions, Waste Control Specialists, Barnwell; DOE: Hanford, Nevada, Los Alamos, Oak Ridge, Savannah River)

## **Budget Update**

## **Risk Communications Briefing (CRESP)**

- Changing up how risks are communicated to the public
- Take away message
  - Obvious comms challenges – are the provided examples relevant? Can some other means of risk comparison be used? Are spokespeople viewed as reliable?
  - What other factors may contribute/complicate conversations?

## **ACTION ITEM: Charge 2 Discussion**

**Develop a “product” that outlines the top 3 suggestions for improving stakeholder interactions**

**Team:** Shell, Shelley, Bob

**Timeline:** Hope to have charges developed into a draft product that we can come to the Fall meeting with; want to get consensus at that mtg for taking back to local boards for final approval

*For my own edification: Oak Ridge Priorities/Recommendations:*

- Increase public meetings/engagement on projects (updates) where feasible; early and often
- Expand workforce development, whether DOE-centric or contractors, to ensure the work can be completed; prepare boards with plans for dissemination publicly to gain and keep the trust of the public
- When remediating land, return it to a state available for beneficial use whenever possible (recreational, business development, conservation)

*Discussion: Our product should include:*

- A set of values/expectations re: how stakeholders want to be engaged
- Timeliness on communications that request feedback from the SSAB and individual boards; at times the turnaround time is too short for full participation
- The 10 Year Vision – the boiled down essence of what needs to happen in the next 10 years
  - Allows a more strategic view of the work that is current/near to current
  - Communications considerations for the document: who gets it, when, how, etc.
    - Who will actually read it?
    - When it comes to others outside of these boards reading the info, it isn't going to get much air time
  - What would we want to see with regard to the development of the document?
    - Want and need more proactive engagement – input solicitation/involvement prior to the development and distribution of the vision document
    - Placed in appropriate context

- Section added for cross-site activities; commonalities (see issues like those listed above for OR)
  - Visuals to tell the story; embed hyperlinks to specific projects and prepared updates for educational purposes
  - The budgetary implications associated with the vision, as captured at the time of issue
- Other thoughts:
    - Collectively, we don't hear about anything that happens at other sites until we come to a Chair's meeting; how do we capture the successes for sharing out to the group
    - The 10-year plan is not all-inclusive; how do we talk about clean up we haven't committed to doing yet?



## FY 2020 Incoming Correspondence

| #   | Date     | To                        | From                  | Description   | DOEIC, Notified board officers of receipt |
|-----|----------|---------------------------|-----------------------|---|---|
| 140 | 2/4/2021 | Salyers, TDEC             | Mullis, DOE           | Final Response to the Tennessee Department of Environment and Conservation Letter Regarding Performance Assessment and Composite Analysis for the Proposed Environmental Management Disposal Facility   | DOEIC, Notified board officers of receipt |
| 141 | 3/3/2021 | Petrie, DOE               | Young, TDEC           | Addendum 5 to the Remedial Design Report/Remedial Action Work Plan for Zone 2 Soils, Slabs, and Subsurface Structures with Work Plan/Technical Memorandum for Exposure Unit 22 25, East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2224&D5/AS/R2)                                   | DOEIC, Notified board officers of receipt |
| 142 | 3/3/2021 | Jones, EPA<br>Young, TDEC | Clemons & Petrie, DOE | 8535 Final Transmittal of Addendum for Demolition of Building 7025 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 (DOE/OR/01-2428&D2/A8) | DOEIC, Notified board officers of receipt |
| 143 | 3/3/2021 | Jones, EPA<br>Young, TDEC | Daffron & Petrie, DOE | Transmittal of an ERRATA to the Addendum to the Waste Handling Plan for the Consolidated Soil and Waste Sites within Zone 2, East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2328&D1/A1)  | DOEIC, Notified board officers of receipt |
| 144 | 3/4/2021 | Jones, EPA<br>Young, TDEC | Petrie, DOE           | Final Distribution of An Erratum to the Melton Valley Administrative Watershed Remedial Action Report Comprehensive Monitoring Plan, Oak Ridge, Tennessee (DOE/OR/01-1982&D3)   | DOEIC, Notified board officers of receipt |
| 145 | 3/4/2021 | Petrie, DOE               | Young, TDEC           | TDEC Approval: Work Plan for Groundwater and Surface Water Monitoring at the K-720 Fly Ash Pile, East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2851&D2/R1)  | DOEIC, Notified board officers of receipt |





## FY 2020 Incoming Correspondence

| #   | Date      | To                        | From          | Description  | DOEIC, Notified board officers of receipt |
|-----|-----------|---------------------------|---------------|--|---|
| 146 | 3/4/2021  | Snyder, DOE               | Mullis, DOE   | Request for appointment of members to the Environmental Management Site-Specific Advisory Board in Oak Ridge   | DOEIC, Notified board officers of receipt |
| 147 | 3/5/2021  | Petrie, DOE               | Atashi, EPA   | EPA Comments: Addendum 10 to the Remedial Design Report/Remedial Action Work Plan for Zone 2 Soils, Slabs, and Subsurface Structures for Exposure Unit Z2-21 with Work Plan/Technical Memorandum at East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2224&D5/A10/R1)      | DOEIC, Notified board officers of receipt |
| 148 | 3/8/2021  | Petrie, DOE               | Jones, EPA    | EPA Approval Letter for extension for the Main Plan Area Groundwater D2 Focused Feasibility Study (FFS) at ETPP  | DOEIC, Notified board officers of receipt |
| 149 | 3/9/2021  | Petrie, DOE               | Young, TDEC   | TDEC Approval Letter: Addendum 7 to the Remedial Design Report/Remedial Action Work Plan for Zone 2 Soils, Slabs, and Subsurface Structures with Work Plan/Technical Memorandum for Exposure Unit 22-35, East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2224&05/A7/R 1) | DOEIC, Notified board officers of receipt |
| 150 | 3/9/2021  | Jones, EPA<br>Young, TDEC | Petrie, DOE   | Transmittal of the Federal Facility Agreement Proposed Appendix J  | DOEIC, Notified board officers of receipt |
| 151 | 3/11/2021 | Petrie, DOE               | VanTrees, EPA | EPA Approval: Addendum 7 to the Remedial Design Report/ Remedial Action Work Plan for Zone 2 Soils, Slab, and Subsurface Structures with Work Plan/ Technical Memorandum for Exposure Unit Z2-35 East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2224&D5/A7/R1)          | DOEIC, Notified board officers of receipt |



## FY 2020 Incoming Correspondence

| #   | Date      | To          | From        | Description   | DOEIC, Notified board officers of receipt |
|-----|-----------|-------------|-------------|---|---|
| 152 | 3/11/2021 | Petrie, DOE | Young, TDEC | TDEC Approval Addendum 10 to the Remedial Design Report/Remedial Action Work Plan for Zone 2 Soils, Slabs, and Subsurface Structures for Exposure Unit 22-21 with Work Plan/Technical Memorandum at East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2224&05/A10/R1) | DOEIC, Notified board officers of receipt |
| 153 | 3/12/2021 | Petrie, DOE | Jones, EPA  | 2021 EPA Comments for Phased Construction Completion Report for Demolition of Centrifuge Buildings and Process Equipment and Piping at the East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/012858&D1)  | DOEIC, Notified board officers of receipt |
| 154 | 3/12/2021 | Petrie, DOE | Young, TDEC | Re: Addendum 2 to the Supplemental Sampling and Analysis Plan for the East Tennessee Technology Park Sitewide Residual Contamination Remedial Investigation K-31-K-33 Area, Oak Ridge, Tennessee (DOE/OR/01-2749&D1/A2)   | DOEIC, Notified board officers of receipt |
| 155 | 3/12/2021 | Petrie, DOE | Young, TDEC | Federal Facility Agreement Milestone Extension Requests for East Tennessee Technology Park Main Plant Area Groundwater Project  | DOEIC, Notified board officers of receipt |
| 156 | 3/16/2021 | Petrie, DOE | Adams, EPA  | Addendum II to the Phased Construction Completion Report for the K-1007 Ponds Area and Powerhouse North Area in Zone 1, East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2294&D2/A2/R1)  | DOEIC, Notified board officers of receipt |
| 157 | 3/12/2021 | Petrie, DOE | Young, TDEC | TDEC Comment Letter: Fiscal Year 2020 Low Risk-Low Complexity and Predominantly Uncontaminated Facilities of the Remaining Facilities Demolition Project at the East Tennessee Technology Park, Oak Ridge, TN (DOE/OR/01-2870&D1)   | DOEIC, Notified board officers of receipt |



## FY 2020 Incoming Correspondence

| #   | Date      | To                        | From                     | Description  | DOEIC, Notified board officers of receipt |
|-----|-----------|---------------------------|--------------------------|--|---|
| 158 | 3/16/2021 | Petrie, DOE               | Jones, EPA               | EPA Response to DOE Path Forward on ETPP Main Plant Area Groundwater Proposed Interim Record of Decision   | DOEIC, Notified board officers of receipt |
| 159 | 3/17/2021 | Jones, EPA<br>Young, TDEC | Daffron & Petrie,<br>DOE | Transmittal of the Addendum 5 (Exposure Unit Z2-41 K-1071 Concrete Pad) to the Fiscal Year 2007 Phased Construction Completion Report for the Zone 2 Soils, Slabs, and Subsurface Structures at East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2723&D2/A5/R2)                     | DOEIC, Notified board officers of receipt |
| 160 | 3/17/2021 | Jones, EPA<br>Young, TDEC | Daffron & Petrie,<br>DOE | Transmittal of the Errata to the Addendum 7 to the Remedial Design Report/Remedial Action Work Plan for Zone 2 Soils, Slabs, and Subsurface Structures with Work Plan/Technical Memorandum for Exposure Unit Z2-35, East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2224&D5/A7/R1) | DOEIC, Notified board officers of receipt |
| 161 | 3/17/2021 | Petrie, DOE               | Young, TDEC              | TDEC Approval: Addendum to the Waste Handling Plan for the Consolidated Soil and Waste Sites within Zone 2, East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2328&D1/A1)  | DOEIC, Notified board officers of receipt |
| 162 | 3/17/2021 | Petrie, DOE               | Jones, EPA               | EPA Approval: ERRATA to the Addendum to the Waste Handling Plan for the Consolidated Soil and Waste Sites within Zone 2, East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2328&D1/A1)   | DOEIC, Notified board officers of receipt |
| 163 | 3/18/2021 | Petrie, DOE               | VanTrees, EPA            | EPA's Approval of the Errata to the Addendum 7 to the Remedial Design Report-Remedial Acton Work Plan for Zone 2 Soils, Slabs, and Subsurface  | DOEIC, Notified board officers of receipt |



## FY 2020 Incoming Correspondence

| #   | Date      | To                        | From                    | Description  | DOEIC, Notified board officers of receipt |
|-----|-----------|---------------------------|-------------------------|--|---|
| 164 | 3/18/2021 | Jones, EPA<br>Young, TDEC | Henry & Petrie,<br>DOE  | Transmittal of the Waste Handling Plan for the Big Spring Water Treatment System Waste at the Y-12 National Security Complex, Oak Ridge, Tennessee (DOE/OR/01-2868&D1)   | DOEIC, Notified board officers of receipt |
| 165 | 3/18/2021 | Petrie, DOE               | Jones, EPA              | EPA Comments: Fiscal Year 2020 Phased Construction Completion Report for the Low Risk/Low Complexity and Predominantly Uncontaminated Facility of the Remaining Facilities Demolition Project at the East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2870&D1)                  | DOEIC, Notified board officers of receipt |
| 166 | 3/22/2021 | Jones, EPA<br>Young, TDEC | Felosi & Petrie,<br>DOE | Transmittal of Phased Groundwater Remedial Investigation Work Plan for the Bethel Valley Final Groundwater Record of Decision Oak Ridge, Tennessee (DOE/OR/01-2824&D2)   | DOEIC, Notified board officers of receipt |
| 167 | 3/24/2021 | Jones, EPA<br>Young, TDEC | Henry & Petrie,<br>DOE  | Submittal of the Fiscal Year 2021 Phased Construction Completion Report for the Oak Ridge Reservation Environmental Management Waste Management Facility (DOE/OR/01-2880&D1)   | DOEIC, Notified board officers of receipt |
| 168 | 3/25/2021 | Petrie, DOE               | Young, TDEC             | TDEC Approval Letter Addendum for Demolition of Building 7025 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 (DOE/OR/01-2428&D2/A8) | DOEIC, Notified board officers of receipt |



## FY 2020 Incoming Correspondence

| #   | Date      | To                        | From                    | Description  | DOEIC, Notified board officers of receipt |
|-----|-----------|---------------------------|-------------------------|--|---|
| 169 | 3/25/2021 | Petrie, DOE               | Richards, EPA           | EPA Approval Addendum for Demolition of Building 7025 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 (DOE/OR/01-2428&D2/A8) | DOEIC, Notified board officers of receipt |
| 170 | 3/26/2021 | Petrie, DOE               | Young, TDEC             | Errata to the Addendum 7 to the Remedial Design Report/ Remedial Action Work Plan for Zone 2 Soils, Slabs, and Subsurface Structures with Work Plan/Technical Memorandum for Exposure Unit 22-35, East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2224&DS/A7 / R1)     | DOEIC, Notified board officers of receipt |
| 171 | 3/26/2021 | Petrie, DOE               | Young, TDEC             | TDEC Comments RE: Appendix L Sampling and Analysis Plan for Exposure Unit 22-13, ETPP (DOE/OR/01-2224&D5/A1/R6/R1)   | DOEIC, Notified board officers of receipt |
| 172 | 3/26/2021 | Petrie, DOE               | Young, TDEC             | Department of Energy's Transmittal of the Federal Facility Agreement FY 2021 Proposed Appendix J   | DOEIC, Notified board officers of receipt |
| 173 | 3/26/2021 | Jones, EPA<br>Young, TDEC | Petrie, DOE             | Transmittal of the 2021 Remediation Effectiveness Report for the U.S. Department of Energy Oak Ridge Site, Oak Ridge, Tennessee, Data and Evaluations (DOE/OR/01-2869&D1)  | DOEIC, Notified board officers of receipt |
| 174 | 3/26/2021 | Jones, EPA<br>Young, TDEC | Hardin & Petrie,<br>DOE | Transmittal of the Addendum 6 to the Fiscal Year 2007 Phased Construction Completion Report for the Zone 2 Soils, Slabs, and Subsurface Structures at East Tennessee Technology Park, Oak Ridge, Tennessee: Exposure Unit Z2-37 Confirmation (DOE/OR/01-2723&D2/A6/R1)                 | DOEIC, Notified board officers of receipt |



## FY 2020 Incoming Correspondence

| #   | Date      | To                        | From                  | Description   | DOEIC, Notified board officers of receipt |
|-----|-----------|---------------------------|-----------------------|---|---|
| 175 | 3/30/2021 | Petrie, DOE               | VanTrees, EPA         | EPA Comments RE: Addendum 2 to the Supplemental Sampling and Analysis Plan for ETPP Sitewide Residual Contamination Remedial Investigation K-31/K-33 Area (DOE/OR/01-2749&D1/A2)  | DOEIC, Notified board officers of receipt |
| 176 | 3/30/2021 | Petrie, DOE               | Urquhart-Foster, EPA  | EPA Approval of the Appendix L Sampling and Analysis Plan for EU Z2-13, ETPP (DOE/OR/01-2224&D5/A1/R6/R1)   | DOEIC, Notified board officers of receipt |
| 177 | 3/30/2021 | Petrie, DOE               | Urquhart-Foster, EPA  | EPA Approval of Appendix L Sampling and Analysis Plan for Exposure Unit Z2-13, ETPP (DOE/OR/01-2224 & D5/A1/R6/R1)  | DOEIC, Notified board officers of receipt |
| 178 | 3/30/2021 | Jones, EPA<br>Young, TDEC | Daffron & Petrie, DOE | Removal of Facilities from the Action Memorandum for the Remaining Facilities Demolition Project at the East Tennessee Technology Park (DOE/OR/01-2049&D2)  | DOEIC, Notified board officers of receipt |
| 179 | 3/31/2021 | Petrie, DOE               | Jones, EPA            | EPA Comments on Appendix J  | DOEIC, Notified board officers of receipt |
| 180 | 4/5/2021  | Petrie, DOE               | Urquhart-Foster, EPA  | EPA Approval: Errata to the Final Phased Construction Completion Report For Poplar Creek High-Risk Facilities Demolition at the East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2826&D3)  | DOEIC, Notified board officers of receipt |
| 181 | 4/5/2021  | Petrie, DOE               | Urquhart-Foster, EPA  | EPA Approval: Addendum 9 to the Remedial Design Report/Remedial Action Work Plan for Zone 2 Soils, Slabs, and Subsurface Structures for Exposure Unit Z2-19 with Work Plan/Technical Memorandum at East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2224&D5/A9/R1) | DOEIC, Notified board officers of receipt |



## FY 2020 Incoming Correspondence

| #   | Date      | To                        | From                  | Description  | DOEIC, Notified board officers of receipt |
|-----|-----------|---------------------------|-----------------------|--|---|
| 182 | 4/6/2021  | Petrie & Cooke, DOE       | Jones, EPA            | EPA Comments: Notification of Intent to Transfer or Lease Building K-1313-F at the East Tennessee Technology Park in Oak Ridge, Tennessee, and Request for Approval of the Building K-1313-F Summary of Survey Results for Building Transfer   | DOEIC, Notified board officers of receipt |
| 183 | 4/9/2021  | Petrie, DOE               | Young, TDEC           | Fiscal Year 2020 Phased Construction Completion Report for Surveillance and Maintenance Waste Management Activities at the Oak Ridge National Laboratory, Oak Ridge, Tennessee (DOE/OR/01-2878&01)   | DOEIC, Notified board officers of receipt |
| 184 | 4/9/2021  | Jones, EPA<br>Young, TDEC | Henry & Petrie, DOE   | Federal Facility Agreement Milestone Extension Request for the Exposure Unit-5 Waste Handling Plan   | DOEIC, Notified board officers of receipt |
| 185 | 4/12/2021 | Jones, EPA<br>Young, TDEC | Daffron & Petrie, DOE | Final Transmittal of the Addendum 10 to the Remedial Design Report/Remedial Action Work Plan for Zone 2 Soils, Slabs, and Subsurface Structures for Exposure Unit Z2-21 with Work Plan/Technical Memorandum at East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01 2224&D5/A10/R2) | DOEIC, Notified board officers of receipt |
| 186 | 4/12/2021 | Petrie, DOE               | Richards, EPA         | Fiscal Year 2020 Phased Construction Completion Report for Surveillance and Maintenance Waste Management Activities at the Oak Ridge National Laboratory, Oak Ridge, Tennessee (DOE/OR/01-2878&01)   | DOEIC, Notified board officers of receipt |
| 187 | 4/15/2021 | Jones, EPA<br>Young, TDEC | Daffron & Petrie, DOE | Federal Facility Agreement Milestone Extension Request   | DOEIC, Notified board officers of receipt |



## FY 2020 Incoming Correspondence

| #   | Date      | To                        | From                    | Description   | DOEIC, Notified board officers of receipt |
|-----|-----------|---------------------------|-------------------------|---|---|
| 188 | 4/15/2021 | Petrie, DOE               | Atashi, EPA             | EPA Approval: Addendum 10 to the Remedial Design Report/Remedial Action Work Plan for Zone 2 Soils, Slabs, and Subsurface Structures with Work Plan/Technical Memorandum for Exposure Unit Z2-21, East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2224&D5/A10/R2) | DOEIC, Notified board officers of receipt |
| 189 | 4/16/2021 | Adler, DOE                | Young, TDEC             | TDEC Approval: Proposed Geotechnical Survey Work at the East Tennessee Technology Park  | DOEIC, Notified board officers of receipt |
| 190 | 4/16/2021 | Petrie, DOE               | Young, TDEC             | TDEC Approval Letter Federal Facility Agreement (FFA) Milestone Extension Request for the Exposure Unit-5 Waste Handling Plan   | DOEIC, Notified board officers of receipt |
| 191 | 4/20/2021 | Petrie, DOE               | Jones, EPA              | EPA Approval of DOE extension request for Exposure Unit (EU) 5 Waste Handling Plan (WHP) at the Y-12 facility   | DOEIC, Notified board officers of receipt |
| 192 | 4/20/2021 | Petrie, DOE               | Jones, EPA              | EPA Approval: Federal Facility Agreement Milestone Extension Request 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&D2)                                       | DOEIC, Notified board officers of receipt |
| 193 | 4/21/2021 | Petrie, DOE               | Froede, EPA             | EPA Approval Phased Groundwater Remedial Investigation Work Plan for the Bethel Valley Final Groundwater Record of Decision Oak Ridge, Tennessee (DOE/OR/01-2824&D2)  | DOEIC, Notified board officers of receipt |
| 194 | 4/21/2021 | Jones, EPA<br>Young, TDEC | Felosi & Petrie,<br>DOE | Transmittal of the Addendum to Remedial Design Report and Remedial Action Work Plan for the Removal of Fuel and Flush Salts From the Molten Salt Reactor Experiment Facility at the Oak Ridge National Laboratory, Oak Ridge, Tennessee (DOE/OR/01-1810&D2/A1)                    | DOEIC, Notified board officers of receipt |





## FY 2020 Incoming Correspondence

| #   | Date      | To          | From        | Description  | DOEIC, Notified board officers of receipt |
|-----|-----------|-------------|-------------|--|---|
| 195 | 4/21/2021 | Petrie, DOE | Young, TDEC | TDEC Comments Re: Phased Groundwater Remedial Investigation Work Plan for the Bethel Valley Final Groundwater Record of Decision, Oak Ridge Tennessee (DOE/ OR/01-2824&D2)   | DOEIC, Notified board officers of receipt |
| 196 | 4/21/2021 | Petrie, DOE | Adams, EPA  | EPA Approval Addendum 5, Exposure Unit (EU) Z2-41, K-1071 Concrete Pad, to the Fiscal Year 2007 Phased Construction Completion Report (PCCR) at ETPP (DOE/OR/01-2723&D2/A5/R2)   | DOEIC, Notified board officers of receipt |
| 197 | 4/21/2021 | Petrie, DOE | Jones, EPA  | EPA requests a 30-day extension for the document, Addendum 6 to the Fiscal Year 2007 Phased Construction Completion Report (PCCR) for the Zone 2 Soils, Slabs, and Subsurface Structures at East Tennessee Technology Park, Oak Ridge, Tennessee: Exposure Unit (EU) Z2-37 Confirmation (DOE/OR/01-2723&D2/A6) | DOEIC, Notified board officers of receipt |
| 198 | 4/22/2021 | Petrie, DOE | Jones, EPA  | EPA Approval to Extend D1 Zone 1 for Balance of Ecological Soil Areas PCCR   | DOEIC, Notified board officers of receipt |
| 199 | 4/23/2021 | Petrie, DOE | Young, TDEC | TDEC Comments RE: Addendum 10 to the Remedial Design Report/Remedial Action Work Plan for Zone 2 Soils, Slabs, and Subsurface Structures for Exposure Unit 22-21 with Work Plan/Technical Memorandum at ETPP (DOE/OR/01-2224&D5/ A 1 0/R2)   | DOEIC, Notified board officers of receipt |
| 200 | 4/26/2021 | Petrie, DOE | Young, TDEC | TDEC Approval: Federal Facility Agreement Milestone Extension Request for Zone 1 Balance of Ecological Soil Areas  | DOEIC, Notified board officers of receipt |



## FY 2020 Incoming Correspondence

| #   | Date      | To                        | From                     | Description  | DOEIC, Notified board officers of receipt |
|-----|-----------|---------------------------|--------------------------|--|---|
| 201 | 4/28/2021 | Petrie, DOE               | Young, TDEC              | TDEC Approval: Federal Facility Agreement Milestone Extension Request 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&D2)                       | DOEIC, Notified board officers of receipt |
| 202 | 4/28/2021 | Petrie, DOE               | Young, TDEC              | TDEC Approval: Addendum 6 to the Fiscal Year 2007 Phased Construction Completion Report for the Zone 2 Soils, Slabs, and Subsurface Structures at East Tennessee Technology Park, Oak Ridge, Tennessee: Exposure Unit 22-37 Confirmation (DOE/OR/01-2723&D2/A6/R1) | DOEIC, Notified board officers of receipt |
| 203 | 4/28/2021 | Petrie, DOE               | Young, TDEC              | TDEC Comments: Phased Construction Completion Report for the K-770 Area Asbestos Cover at the East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2874&D1)   | DOEIC, Notified board officers of receipt |
| 204 | 4/28/2021 | Jones, EPA<br>Young, TDEC | Daffron & Petrie,<br>DOE | Transmittal of the Addendum to the Waste Handling Plan for the Consolidated Soil and Waste Sites within Zone 2, ETPP (DOE/OR/01-2328&D1/A2)  | DOEIC, Notified board officers of receipt |
| 205 | 4/28/2021 | Jones, EPA<br>Young, TDEC | Daffron & Petrie,<br>DOE | Transmittal of the Phased Construction Completion Report for Exposure Unit Z2-26 in Zone 2, East Tennessee Technology Park, Oak Ridge Tennessee (DOE/OR/01-2889&D1)  | DOEIC, Notified board officers of receipt |
| 206 | 4/29/2021 | Jones, EPA<br>Young, TDEC | Daffron & Petrie,<br>DOE | Transmittal of the Work Plan/Technical Memorandum for Exposure Unit Z2 16 in Zone 2 of the East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2224&D5/A11)  | DOEIC, Notified board officers of receipt |
| 207 | 4/29/2021 | Petrie, DOE               | Jones, EPA               | EPA Comments: Work Plan/Technical Memorandum for Exposure Unit Z2-16 in Zone 2 of the East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2224&D5/A11)   | DOEIC, Notified board officers of receipt |



## FY 2020 Incoming Correspondence

| #   | Date      | To          | From        | Description  | DOEIC, Notified board officers of receipt |
|-----|-----------|-------------|-------------|--|---|
| 208 | 4/30/2021 | Petrie, DOE | Young, TDEC | TDEC Approval Letter: Phase 1 Technical Memorandum for Exposure Unit 5 Upper East Fork Poplar Creek (UEFPC) Characterization Area Attachment C.3 to the UEFPC Soils Remedial Action Work Plan (RAWP) DOE/OR/01-2423&D2 Revision 1 Attachment C.3 | DOEIC, Notified board officers of receipt |
| 209 | 5/3/2021  | Petrie, DOE | Jones, EPA  | EPA Comments: Phased Construction Completion Report for the K-770 Area Asbestos Cover at the East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2874&D1)  | DOEIC, Notified board officers of receipt |

**From:** [dougcolcl@aol.com](mailto:dougcolcl@aol.com)  
**To:** [ORSSAB](#)  
**Subject:** [EXTERNAL] Re: ORSSAB Meetings April 28, May 5 & May 12  
**Date:** Thursday, April 29, 2021 11:07:34 AM  
**Attachments:** [EMDF Proposed Plan 8 30 18.pdf](#)  
[Proposed EMDF 08 01 2019 SELC Letter to John Michael Japp, US Dep't of Energy.pdf](#)  
[Proposed EMDF SELC Letter 12 10 2018 John Japp.pdf](#)  
[image001.png](#)

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Hi Ms Kimel:

Yes I received the Meeting announcements, and will plan to attend the two meetings in May. I had last minute conflict for meeting yesterday and was unable to link in.

Some question/observations ( see following ) if you can make the Board aware in advance--

Has there been a hard RFQ cost/quote requested for the off site disposal option from potential contractors such as Energy Solutions? I am aware that the EM has done some economic analysis ( see response below from Jay Mullis ) but to what extent has the estimate been substantiated by a quote ?

Has the ORSSA Board addressed the legal and environmental facts communicated by the Southern Environmental Law Center -- see attached ?

The proposed on site disposal option has a number of aspects that have not been considered in the cost or technical/geologic , etc factors of the on site proposed plan.

---Respectfully , Doug

From: [ORSSAB@orem.doe.gov](mailto:ORSSAB@orem.doe.gov)  
To: [dougcolcl@aol.com](mailto:dougcolcl@aol.com)  
Sent: 4/28/2021 7:35:25 PM Eastern Standard Time  
Subject: RE: [EXTERNAL] ORSSAB Meetings scheduled for April 28, May 5th, and May 12th

Mr. Colclasure,

I did not see you at tonight's EM & Stewardship Committee meeting, and I noticed you have not accepted the calendar invitations for the other two meetings next month that were sent per your request. Can you please confirm that you received those?

Thank you,

Shelley Kimel

Referenced documents from public comment:

Email from Jay Mullis April 28, 2021

Letter from the Southern Environmental Law Center to DOE August 1, 2019

From: [Jay.Mullis@orem.doe.gov](mailto:Jay.Mullis@orem.doe.gov)  
To: [dougcolcl@aol.com](mailto:dougcolcl@aol.com)  
Cc: [Jay.Mullis@orem.doe.gov](mailto:Jay.Mullis@orem.doe.gov)  
Sent: 4/28/2021 4:19:02 PM Eastern Standard Time  
Subject: EMDF Cost Estimate Question

Doug,

Ike White let me know you were looking for the document that details the ~\$700 million in cost avoidance for DOE's Environmental Management program if we construct EMDF. That information is included in the EMDF Remedial Investigation/Feasibility Study (RI/FS) and Proposed Plan, both of which are publicly available.

For your convenience, I have attached the Proposed Plan to this email. The cost information is included in Table 2. The RI/FS is too large to email, but it is available to you in the administrative record found at the DOE Information Center (DOEIC). You can access documents at the DOEIC at this link: <https://doeic.science.energy.gov/>.

Best regards,

Jay

# SOUTHERN ENVIRONMENTAL LAW CENTER

Telephone 615-921-9470

1033 DEMONBREUN STREET, SUITE 205  
NASHVILLE, TN 37203

Facsimile 615-921-8011

August 1, 2019

John Michael Japp  
FFA Project Manager  
Oak Ridge Environmental Management  
U.S. Department of Energy Oak Ridge Operations  
P.O. Box 2001  
Oak Ridge, TN 37831

**RE: Continuing lack of meaningful public comment on Proposed Plan for the Disposal of Oak Ridge Reservation Comprehensive Environmental Response, Compensation, and Liability Act Waste (September 2018)**

Dear Mr. Japp,

The U.S. Department of Energy (Department) has failed to provide an opportunity for meaningful public comment on its proposed plan to build and operate a hazardous and radioactive waste landfill that would corrupt existing greenfields (Proposed Plan).<sup>1</sup> Under established law, the Department failed to “include sufficient information” regarding the Proposed Plan before the first public comment period.<sup>2</sup> Simply speaking, this means the Department must not only reopen public comment, but also provide the “notice and analysis” necessary to fully inform the public and provide for meaningful public comment.

This is not the first time that we have raised this concern. In a letter dated December 10, 2018, the Southern Environmental Law Center, Advocates for the Oak Ridge Reservation, Tennessee Chapter of the Sierra Club, and Tennessee Citizens for Wilderness Planning commented on the Proposed Plan for the Disposal of Oak Ridge Reservation Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Waste (the Proposed Plan).<sup>3</sup> We stated that the Proposed Plan was inadequate for many reasons, including the Department’s failure to provide sufficient supporting analysis, data, and information, including an incomplete characterization of the proposed landfill location and proposed regulatory waivers that have not been obtained.<sup>4</sup> The Proposed Plan also failed to include waste acceptance criteria, discuss long-term effectiveness and permanence of the proposed landfill, disclose its primary

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<sup>1</sup> U.S. Dep’t of Energy, *Proposed Plan for the Disposal of Oak Ridge Reservation Comprehensive Environmental Response, Compensation, and Liability Act Waste* (Sept. 2018) [hereinafter “Proposed Plan”].

<sup>2</sup> 42 U.S.C. § 9617(a) (“[T]he notice and analysis published . . . shall include sufficient information as may be necessary to provide a reasonable explanation of the proposed plan . . . .”); 40 C.F.R. § 300.430(f)(3) (requiring the lead agency to provide a reasonable opportunity for public comment on “the proposed plan and the supporting analysis and information located in the information repository”).

<sup>3</sup> Attachment (Att.) 1, Letter from Christina I. Reichert, SELC, et al., to John Michael Japp, DOE, Dec. 10, 2018.

<sup>4</sup> *Id.* at 3–4.

balancing criteria, or account for the proposed landfill's long-term liability and costs.<sup>5</sup> As a result, the public comment period was too hobbled for the Department, based on its "review [of] the public comments . . . to determine if the alternative remains the most appropriate remedial action for the site or site problem."<sup>6</sup>

The Department should not be allowed to rush ahead with a Proposed Plan that could put higher levels of radioactive pollution into nearby waters that Tennesseans use for recreation and fishing, particularly when both the State of Tennessee and the U.S. Environmental Protection Agency have raised concerns that this proposed landfill would impact human health and the environment.<sup>7</sup> After the close of the comment period, correspondence between the Department, the Tennessee Department of Environment and Conservation (TDEC), and the U.S. Environmental Protection Agency Region IV (EPA Region IV), regarding gaps in the Department's Proposed Plan has only heightened our concern about the Proposed Plan and the Department's ongoing failure to provide sufficient information to support it.

Our concern is further heightened because the Department has a history of failure to adequately address the legacy of waste created as part of its nuclear program.<sup>8</sup> Indeed, at Oak Ridge Reservation, TDEC has expressed concern that the Department's existing landfill, which

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<sup>5</sup> Att. 2, Letter from Virginia H. Dale, Advocates for the Oak Ridge Reservation (AFORR), to John Michael Japp, DOE, Dec. 3, 2018 [hereinafter "AFORR Comment Letter"]; Att. 3, Comments from Mark Watson, City of Oak Ridge, to John Michael Japp, DOE, at the Public Hearing on the U.S. Department of Energy's Proposed Plan for the Disposal of Oak Ridge Reservation Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Waste, Nov. 7, 2018 [hereinafter "City of Oak Ridge Comments"]; Att. 4, Letter from Axel C. Ringe, Tennessee Chapter of the Sierra Club, to John Michael Japp, DOE, Dec. 10, 2018 [hereinafter "Sierra Club Comment Letter"].

<sup>6</sup> 40 C.F.R. § 300.430(f)(1)(ii).

<sup>7</sup> Att. 5, Letter from Chuck Head, TDEC, to David Adler, DOE, Jul. 8, 2019 [hereinafter "TDEC's Groundwater Conditions Letter"], [https://www.tn.gov/content/dam/tn/environment/remediation/documents/oakridgereservation/emdf-documents/rod-&-supplemental-documents/73212\\_EMDF\\_GW\\_Model\\_TDEC\\_07\\_08\\_2019.pdf](https://www.tn.gov/content/dam/tn/environment/remediation/documents/oakridgereservation/emdf-documents/rod-&-supplemental-documents/73212_EMDF_GW_Model_TDEC_07_08_2019.pdf); Att. 6, Letter from David W. Salyers, TDEC, to John A. Mullis, DOE, & Mary S. Walker, EPA, Apr. 5, 2019 [hereinafter "TDEC Formal Dispute Position"], [https://www.tn.gov/content/dam/tn/environment/remediation/documents/oakridgereservation/emdf-documents/ffs-water-management/ffs-water-management/73212\\_EMWFM EMDF FFS Formal Dispute\\_TDEC\\_04\\_05\\_2019.pdf](https://www.tn.gov/content/dam/tn/environment/remediation/documents/oakridgereservation/emdf-documents/ffs-water-management/ffs-water-management/73212_EMWFM EMDF FFS Formal Dispute_TDEC_04_05_2019.pdf); Att. 7, Letter from Mary S. Walker, EPA, to John A. Mullis II, DOE, & David W. Salyers, TDEC, Mar. 21, 2019; [hereinafter "EPA Formal Dispute Position"], [https://www.tn.gov/content/dam/tn/environment/remediation/documents/oakridgereservation/emdf-documents/ffs-water-management/73212\\_EMWFM EMDF FFS Formal Dispute EPA\\_03\\_21\\_2019.pdf](https://www.tn.gov/content/dam/tn/environment/remediation/documents/oakridgereservation/emdf-documents/ffs-water-management/73212_EMWFM EMDF FFS Formal Dispute EPA_03_21_2019.pdf); Att. 8, Letter from David W. Salyers, TDEC, to Andrew Wheeler, EPA, Jul. 5, 2019, [hereinafter "TDEC Formal Dispute Position Supplement"] [https://www.tn.gov/content/dam/tn/environment/remediation/documents/oakridgereservation/emdf-documents/ffs-water-management/73212\\_EMWFM EMDF FFS Formal Dispute TDEC\\_07\\_05\\_2019.pdf](https://www.tn.gov/content/dam/tn/environment/remediation/documents/oakridgereservation/emdf-documents/ffs-water-management/73212_EMWFM EMDF FFS Formal Dispute TDEC_07_05_2019.pdf).

<sup>8</sup> Att. 9, U.S. Gov't Accountability Office, Report to the Chairman of the Subcommittee on Strategic Forces, Committee on Armed Services, U.S. Senate, *Department of Energy: Program-Wide Strategy and Better Reporting Needed to Address Growing Environmental Cleanup Liability* (Jan. 2019); Att. 10, U.S. Gov't Accountability Office, Report to the Subcommittee on Strategic Forces, Committee on Armed Services, U.S. Senate, *Nuclear Waste: DOE Should Take Actions to Improve Oversight of Cleanup Milestones* (Feb. 2019); Att. 11, U.S. Gov't Accountability Office, Testimony Before the Subcommittee on Oversight and Investigations, Committee on Energy and Commerce, House of Representatives, *Department of Energy: Environmental Liability Continues to Grow, and Significant Management Challenges Remain for Cleanup Efforts* (May 2019).



is strikingly similar to the proposed landfill, is sited within the water table and is contaminating groundwater and nearby surface water.<sup>9</sup> It is important that the Department take the time necessary to ensure that this clean up does not repeat, again, the mistakes of the past.

The Department itself has admitted that there are significant information gaps in the Proposed Plan that was provided for public comment, including but not limited to an unfinished characterization of the proposed landfill location and proposed waivers for three applicable or relevant and appropriate requirements from the Toxic Substances Control Act and Tennessee law.<sup>10</sup> Moreover, the Department has still not provided the public with a complete site characterization, groundwater modeling based on actual conditions, or the Department's waste acceptance criteria. These are not the only information gaps that prevented meaningful public comment. At a minimum, the Department should provide:

- 1) Complete data demonstrating the hydrologic conditions underlying the proposed disposal site under both wet and dry conditions;<sup>11</sup>
- 2) All of the applicable or relevant and appropriate requirements (ARARs) under federal environmental, state environmental, or facility siting laws. The proposed plan includes exceptions to known ARARs before those requirements were evaluated by TDEC and EPA Region IV. Since then, both TDEC and EPA Region IV have insisted that the Department abide by the ARARs and objected to some of the exceptions the Department generated for itself;<sup>12</sup>
- 3) Waste acceptance criteria, including an analytical limit for mercury co-contamination;<sup>13</sup>
- 4) A complete Composite Analysis and a Comparative Analysis of costs for Onsite and Offsite alternatives;<sup>14</sup>
- 5) Adequate detail to assess the Department's plan for remediation and disposal of mercury wastes;<sup>15</sup>
- 6) Data to assess the proposed landfill's control of radionuclides;<sup>16</sup> and
- 7) Its knowledge of the failures caused by the design, construction, and operation of the Environmental Waste Management Facility landfill (EMWMF landfill) that began receiving waste in 2002, and any other information regarding the short and long-term performance of the EMWMF.<sup>17</sup>

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<sup>9</sup> TDEC's Groundwater Conditions Letter.

<sup>10</sup> Proposed Plan at 6, 18, 21.

<sup>11</sup> TDEC Groundwater Conditions Letter; AFORR Comment Letter; City of Oak Ridge Comments.

<sup>12</sup> TDEC Formal Dispute Position; EPA Formal Dispute Position; TDEC Formal Dispute Position Supplement; City of Oak Ridge Comments; Sierra Club Comment Letter.

<sup>13</sup> EPA Formal Dispute Position; TDEC Groundwater Conditions Letter; AFORR Comment Letter; City of Oak Ridge Comments; Sierra Club Comment Letter.

<sup>14</sup> TDEC Groundwater Conditions Letter; AFORR Comment Letter; City of Oak Ridge Comments; Sierra Club Comment Letter.

<sup>15</sup> City of Oak Ridge Comments; Sierra Club Comment Letter.

<sup>16</sup> TDEC Groundwater Conditions Letter; Sierra Club Comment Letter.

<sup>17</sup> TDEC Groundwater Conditions Letter; Sierra Club Comment Letter.

All of this information should have been made available to the public prior to the public comment period. As a result, the Department must “[s]eek additional public comment on a revised proposed plan,”<sup>18</sup> once it has provided the necessary information to the public.

Based on the concerns raised above, we ask that the Department provide meaningful opportunities for public comment. Since the Department failed to adequately perform its required tasks prior to the initial public comment period, it must now, to the extent it has taken any steps to address the numerous deficiencies in the Proposed Plan, provide this information to the public and reopen the public comment period. Before any record of decision is approved, the Department must hold a new public comment period after it has provided the information it is required to provide pursuant to CERCLA and the Department’s regulations.

Sincerely,



Nate Watson\*  
Southern Environmental Law Center

Christina Reichert  
Southern Environmental Law Center

Ellen D. Smith  
Advocates for the Oak Ridge Reservation

Axel Ringe  
Tennessee Chapter of the Sierra Club

Sandra Goss  
Tennessee Citizens for Wilderness Planning

\*Tennessee Bar Applicant

Attachments provided via ShareFile: <https://southernenvironment.sharefile.com/d-sd546379b8554d858>

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<sup>18</sup> 40 C.F.R. § 300.430(f)(3)(ii)(B).

**From:** [Virginia Dale](#)  
**To:** [ORSSAB](#)  
**Subject:** [EXTERNAL] Letter to Sec Granholm re EMDF Landfill  
**Date:** Thursday, April 29, 2021 9:44:02 AM  
**Attachments:** [AFORR SC letter to DOE re EMDF April 8 2021.pdf](#)

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Dear Ms. Kimel,

Since the ORSSAB will be discussing the EMDF landfill on May 6, could you please share with all of the members of the ORSSAB the attached letter regarding the EMDF. This letter was sent to Secretary Granholm from the Advocates for the Oak Ridge Reservation and the Tennessee Chapter of the Sierra Club to express our concerns with the project. Thank you for your help.

Best wishes,  
Virginia Dale  
President, Advocates for the Oak Ridge Reservation

\*\*\*\*\*  
This message does not originate from a known Department of Energy email system.  
Use caution if this message contains attachments, links or requests for information.  
\*\*\*\*\*

Referenced document from public comment:

Joint letter from The Advocates for the Oak Ridge Reservation and The Sierra Club to Department of Energy Secretary Jennifer Granholm



Tennessee Chapter  
P.O. Box 113, Powell TN 37849  
[www.sierraclub.org/tennessee](http://www.sierraclub.org/tennessee)



Advocates for the Oak Ridge Reservation  
209 Whippoorwill Drive, Oak Ridge, TN 37830  
[www.aforr.info](http://www.aforr.info)

April 8, 2021

Re: Proposed Environmental Management Disposal Facility (EMDF) in Oak Ridge, Tennessee  
To: US Department of Energy Secretary Granholm

Dear Secretary Granholm,

Our two organizations want you to be aware of our concerns about a proposal by the Department of Energy (DOE) Oak Ridge Office of Environmental Management (OREM) to build a new landfill on the DOE Oak Ridge Reservation (ORR) for radioactive and hazardous waste from ongoing cleanup. Cleanup waste is currently going to a similar landfill that was supposed to have capacity for all planned cleanup. Even after doubling in size from the originally planned capacity, the current landfill has filled faster than expected, largely because space was taken by large volumes of clean soil backfill and by some demolition waste that may have been suitable for disposal in other onsite landfills.

The proposed new landfill site is in an area of the ORR that the OREM End Use Working Group (a federal-state-local community partnership, see <https://www.energy.gov/orem/downloads/end-use-working-group-report>) designated to be kept uncontaminated, while other areas were stipulated to be permanently sacrificed to contamination. This site has shallow and upwelling groundwater (hydrology unsuitable for waste disposal), is in a watershed that has been relatively unaffected by past federal nuclear activities, and supports mature forest and wetlands. Because the proposed landfill is classified as a remedial action under CERCLA (Superfund), it would be built and operated without the prescriptive regulatory oversight that applies to ordinary landfills. Furthermore, OREM will request waivers from some substantive environmental regulations. More information can be found at <https://aforr.info/hazardous-waste-landfill-emdf/> and specifically at <https://aforr.info/wp-content/uploads/2021/03/Radioactive-and-hazardous-waste-disposal.pdf>.

After proper characterization, some of the waste could be sent to approved facilities at dry, isolated locations in the western U.S. that have suitable conditions for effective long-term isolation, unlike wet and populous eastern Tennessee. Instead, OREM has been pursuing its landfill plan for over a decade but has not answered basic questions from environmental groups, local government, and the public. **We ask that information about the four items below be provided and that DOE engage full public participation in discussion of these issues prior to the release of the draft ROD.**

- 1) Details of waste acceptance criteria and requirements for waste. (see [letter from the Tennessee Department of Environment and Conservation dealing with these concerns](#)).
- 2) Full details of the comparative analysis of costs and local jobs for the Onsite and Offsite alternatives.

- 3) The specific waivers of regulatory requirements that would be requested for each of the onsite options and the rationale for each requested waiver.
- 4) Treatment technologies that have been evaluated or are planned to reduce waste volume in the disposal facility and immobilize any mercury waste prior to disposal.

Before an alternative is chosen for onsite disposal, the site for the landfill and the waste to be disposed should be characterized well enough to ensure it can be designed to protect human health and the environment. This characterization is essential to adequately evaluate environmental justice impacts to the nearby Scarboro neighborhood, which was designated as a segregated community during World War II. Furthermore, credible limits on the amount and concentration of hazardous chemicals and radionuclides that can be disposed in a landfill in Oak Ridge must be established and used to determine the volume of waste that should be buried onsite.

OREM told members of the Oak Ridge Site Specific Advisory Board (SSAB) that DOE will likely issue in April a draft Record of Decision (ROD) to build the landfill. We have been told that the questions above will be addressed after a decision is made to build the landfill. However, after the final decision to build the landfill is made, these questions will be answered to fit within the framework of the landfill, not in an objective manner that protects human health and the environment. Moreover, the public deserves to have detailed information about these issues before that decision is made. Wastes from the Manhattan Project and Cold War are not truly being cleaned up if they are merely moved to a previously clean site without adequate consideration for their unique properties and long-term protection of the environment. We appreciate your attention to these concerns.

Sincerely,

*Virginia H Dale*

Virginia H. Dale  
Advocates for the Oak Ridge Reservation, President  
[Virginia.dale4@gmail.com](mailto:Virginia.dale4@gmail.com)



Mac Post  
Tennessee Chapter Sierra Club, Chair  
[chapter.chair@tennessee.sierraclub.org](mailto:chapter.chair@tennessee.sierraclub.org)

CC:

Tennessee Department of Environment and Conservation  
David W. Salyers, Commissioner  
Greg Young, Deputy Commission for Bureau of the Environment  
Patrick Flood, Commissioner's Designee, Dept. of Environment and Conservation for  
Underground Storage Tanks and Solid Waste Disposal Control Board  
Colby Morgan, Deputy Director, Remediation  
Randy Young, TDEC FFA Project Manager  
Environmental Protection Agency  
Michael Regan, Administrator  
Connie Jones, EPA Region 4 FFA Project Manager  
DOE EM  
Ike White, Acting Assistant Secretary for the Office of Environmental Management  
Roger Petrie, DOE FFA Project Manager

Council on Environmental Quality

Sara Gonzalez-Rothi, Senior Director for Water

Senators Tennessee; Marsha Blackburn and Bill Hagerty

Congressman Chuck Fleischmann

Oak Ridge City Council

Amy Fitzgerald, City of Oak Ridge

Eric Ault, City of Oak Ridge Environmental Quality Advisory Board

