

Oak Ridge Site Specific Advisory Board Monthly Meeting



Wednesday, November 13, 2019, 6 p.m.

DOE Information Center
1 Science.gov Way
Oak Ridge, Tennessee

The mission of the Oak Ridge Site Specific Advisory Board (ORSSAB) is to provide informed advice and recommendations concerning site specific issues related to the Department of Energy's (DOE's) Environmental Management (EM) Program at the Oak Ridge Reservation. In order to provide unbiased evaluation and recommendations on the cleanup efforts related to the Oak Ridge site, the Board seeks opportunities for input through collaborative dialogue with the communities surrounding the Oak Ridge Reservation, governmental regulators, and other stakeholders.



Oak Ridge Site Specific Advisory Board
Wednesday, November 13, 2019, 6:00 p.m.
DOE Information Center
1 Science.Gov Way, Oak Ridge, TN 37831
AGENDA

- I. Welcome and announcements (S. Lohmann) 6:00–6:15
- II. Comments from federal and state agency representatives
(D. Adler, C. Jones, K. Czartoryski) 6:15–6:20
- III. Presentation: MSRE Project Initiatives (B. McMillan) 6:20–6:40
Issue Group: Keebler, Lohmann, McCurdy, Weigel
Questions regarding the **presentation/speaker only** 6:40–6:50
 - i. Board members
 - ii. Guests - *Please use the microphone so questions about the presentation can be documented for the meeting record.*
- IV. Public comment period (A. Duke) 6:50-7:00
 - i. Comments on **other topics or concerns** for DOE or the board - *Please use the microphone so comments for the board or DOE can be documented for the meeting record.*
- V. Call for additions & motion to approve agenda (S. Lohmann) 7:00
 - A. Requests for new action items
 - B. Next meeting – Wednesday, February 12
Presentation: Processing of Uranium-233 Material (J. Bolon)
Issue group: Browning, Keebler, Perez, Samaras, Shields

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

- VI. Board Business 7:05–7:15
 - A. Motion to Approve: September 11, 2019 Meeting Minutes (B. Shoemaker)
 - B. Motion to Approve: October 9, 2019 Meeting Minutes (B. Shoemaker)
 - C. Motion to Approve: EM SSAB Chairs Budget Process Recommendation
 - D. Motion to Approve: EM SSAB Chairs Transportation Recommendation
- 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)
 - B. Executive (S. Lohmann)
- IX. Additions to agenda & closing remarks (S. Lohmann) 7:25–7:30
- X. Adjourn 7:30

CONTENTS

AGENDA

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

CALENDARS

1. November
2. December (draft)

BOARD MINUTES/RECOMMENDATIONS & MOTIONS

1. September 11, 2019 unapproved meeting minutes
2. October 9, 2019 unapproved meeting minutes
3. Chairs Recommendations
 - a. Recommendation #1 Budget
 - b. Recommendation #2 Travel and Disposition

REPORTS & MEMOS

1. Responses to Recommendations
 - a. Recommendation 243 on Cleanup Milestones
 - b. Recommendation 244 on Science and Technology
2. EM Project Update and Abbreviations
3. Travel Opportunities for FY 2019
4. Incoming Correspondence
5. Travel report - Lohmann

Bill McMillan professional bio

Short

William (Bill) G. McMillan is a Portfolio Federal Project Director for the Department of Energy (DOE) Oak Ridge Office of Environmental Management (OREM) with the responsibility for overseeing all Environmental Management cleanup, decontamination, decommissioning, waste storage, and disposal operations at the Oak Ridge National Laboratory. Bill has been with DOE for more than 30 years, and joined the Oak Ridge Office of Environmental Management in 1995. He has a master's degree in Environmental Systems Engineering from Clemson University.

long

William (Bill) G. McMillan is a Portfolio Federal Project Director for the Department of Energy (DOE) Oak Ridge Office of Environmental Management (OREM) with the responsibility for overseeing all Environmental Management cleanup, decontamination, decommissioning, waste storage, and disposal operations at the Oak Ridge National Laboratory.

Bill has been with DOE for more than 30 years, and joined the Oak Ridge Office of Environmental Management in 1995. Since coming into OREM, Bill has performed program and project management activities for low-level waste disposition, transuranic waste characterization and disposition, disposition of Uranium-233, and various remediation and construction activities.

Bill's career has also included five years with the DOE Y-12 National Security Complex Site Office, three years with the Savannah River Operations Office and five years with the South Carolina Department of Health and Environmental Control.

Bill has a Master of Science Degree in Environmental Systems Engineering from Clemson University, and a Bachelor of Science Degree in Biology from the College of Charleston. He lives in Oak Ridge with his wife Kathy, and has two grown sons.



Molten Salt Reactor Experiment Project Initiatives

Bill McMillan, Portfolio Federal Project Director for the
Oak Ridge National Laboratory

Oak Ridge Office of Environmental Management

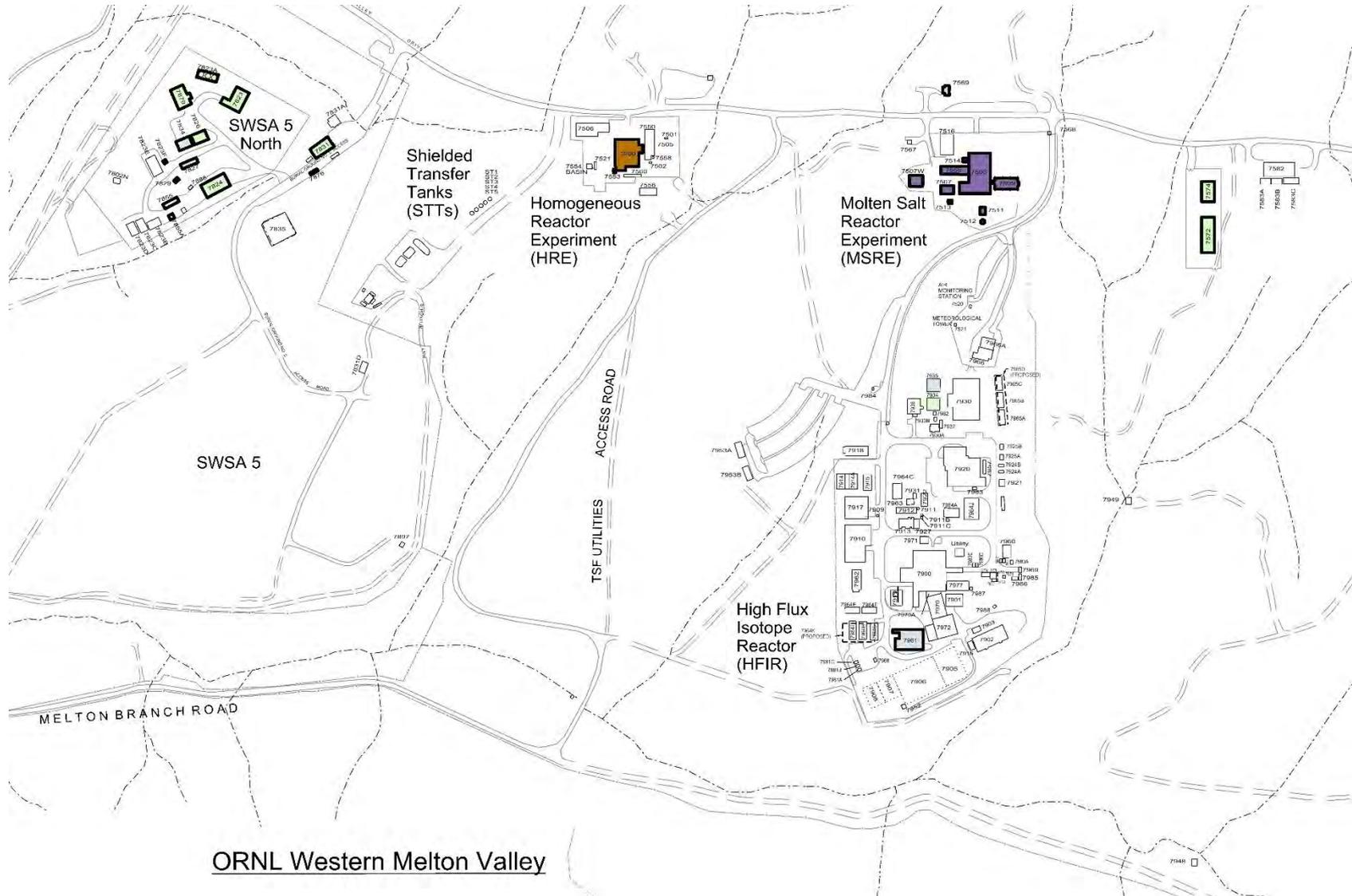
November 13, 2019

The Molten Salt Reactor Experiment (MSRE) is an experimental reactor at ORNL that successfully operated from 1965-1969

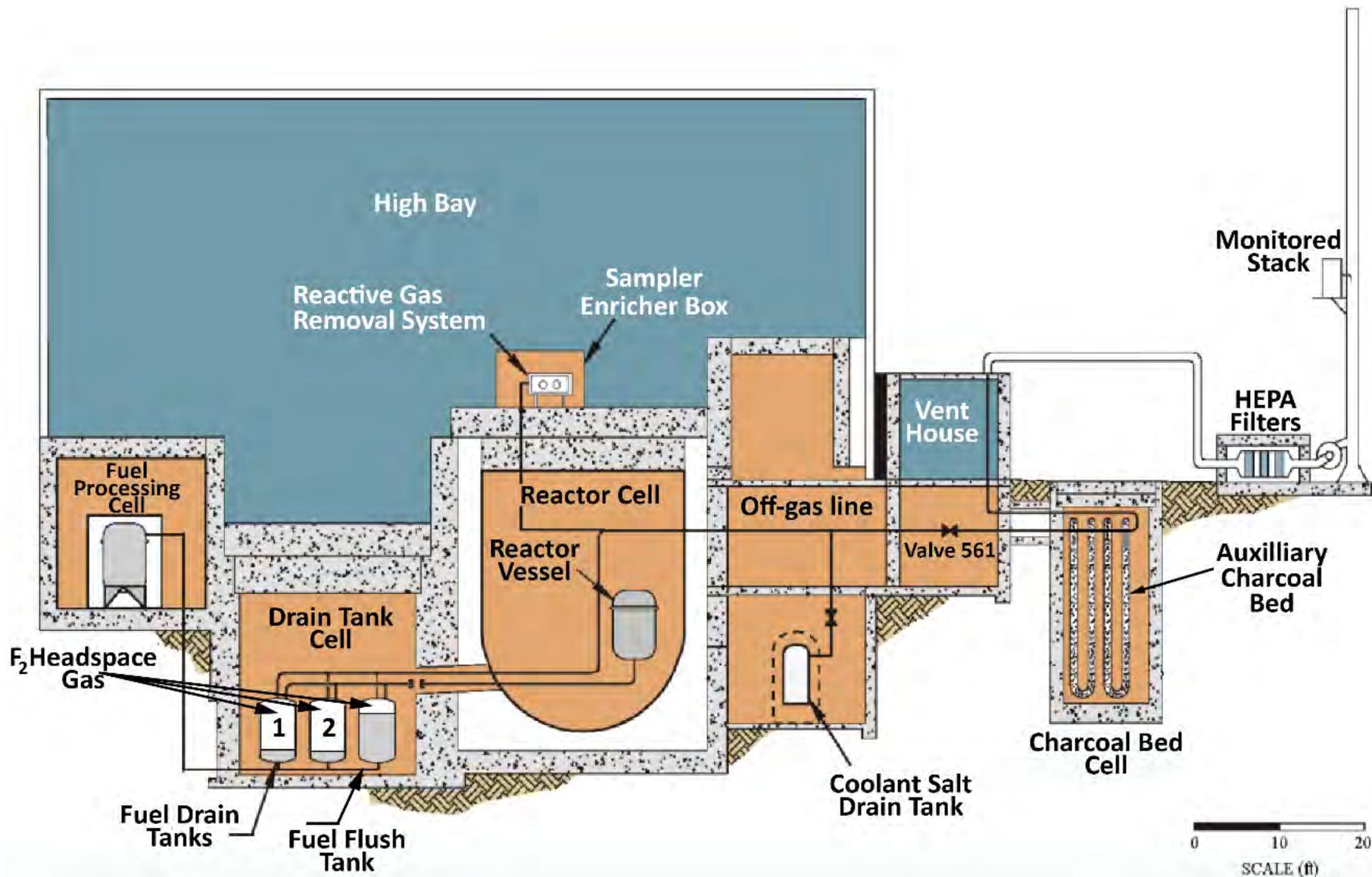
- Used molten fuel salt mixture
 - U-235 and U-233 fluoride salts
 - Trace of Plutonium (<1 Kg)
- Residual fuel salt remains stored in Fuel Drain Tanks today
 - In “frozen” state (density similar to concrete)
 - Contaminated with fission products
 - <2.5 kg U per tank
 - 98% of the radioactivity is from Cs-137 and Sr-90
 - Constantly generates fluorine gas from radiolysis



MSRE Location



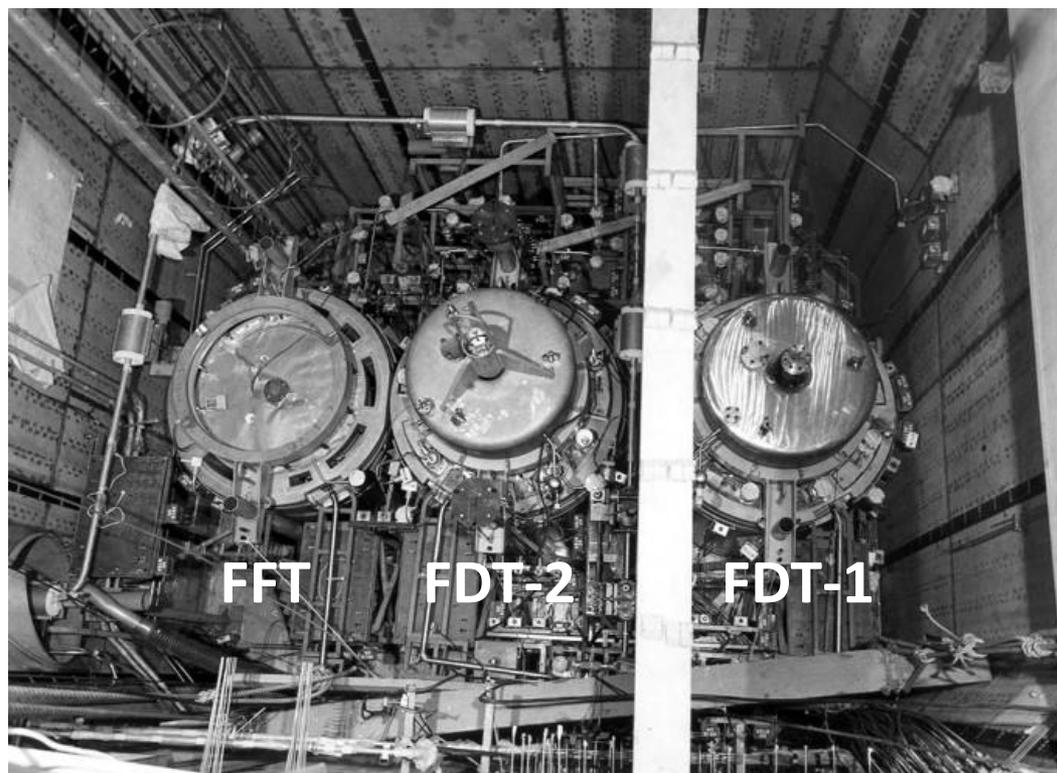
General Facility Layout



| Timeframe | Notable Activities |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| After 1969 Shutdown | Fuel Salt drained into two drain tanks, and reactor loop flushed and drained to flush tank |
| 1994 | Positive confirmation of uranium migration <ul style="list-style-type: none">• Significant concentrations of F₂ and UF₆ gasses in off gas system led to contamination of auxiliary charcoal bed |
| 1995-2000 | Cleanup of auxiliary charcoal bed, install Reactive Gas Removal System (RGRS) |
| 2001-2008 | Defueling, attempted salt transfer |
| 2008-Present | Reactive gas management operations, surveillance and maintenance |

Constant generation of fluorine gas in the tanks poses the most immediate hazard at MSRE

- Fuel salt generates 2.63×10^{-4} or 0.000263 psia/hr of fluorine gas
- Tanks are held at vacuum (i.e. negative) pressure to prevent gas leakage into facility
- Fluorine gas is pumped out of tanks and sent through a treatment system every six months
- Significant maintenance is performed daily throughout the rest of the aging facility



Reactive Gas Removal System (RGRS) Operations

- Reactive Gas Removal System is used to remove fluorine and uranium contaminants during pumpdown cycles
- Several recent failures have occurred due to aging and non-optimal system design
 - Harsh fluorine environment degrades piping and components
- Continuous equipment, process, and procedure upgrades



Engineering Evaluation was completed to identify recommended actions to assure reliable operations at MSRE

Two key recommendations:

1. Design and install a continuous vent and purge system to replace the Reactive Gas Removal System
 - Eliminate large concentrations of fluorine gas by current process
 - Eliminate risk from corroded RGRS components
2. Layup MSRE to address aging electrical systems, personnel, and environmental risks
 - Reduce risk of electrical system failures and hazards
 - Prepare facility for future decommissioning

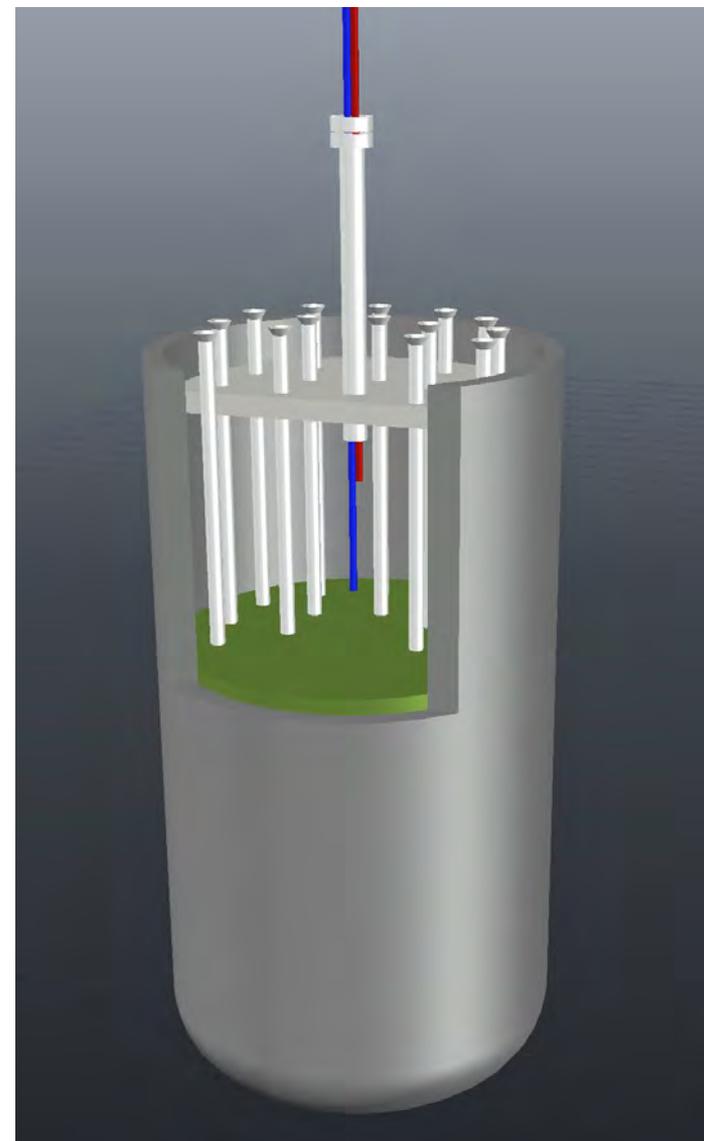
Three primary actions are underway at MSRE to improve reliability and long-term effectiveness:

- Continuous Purge System
- MSRE Layup
- In-Situ Decommissioning (ISD)

Continuous Purge System

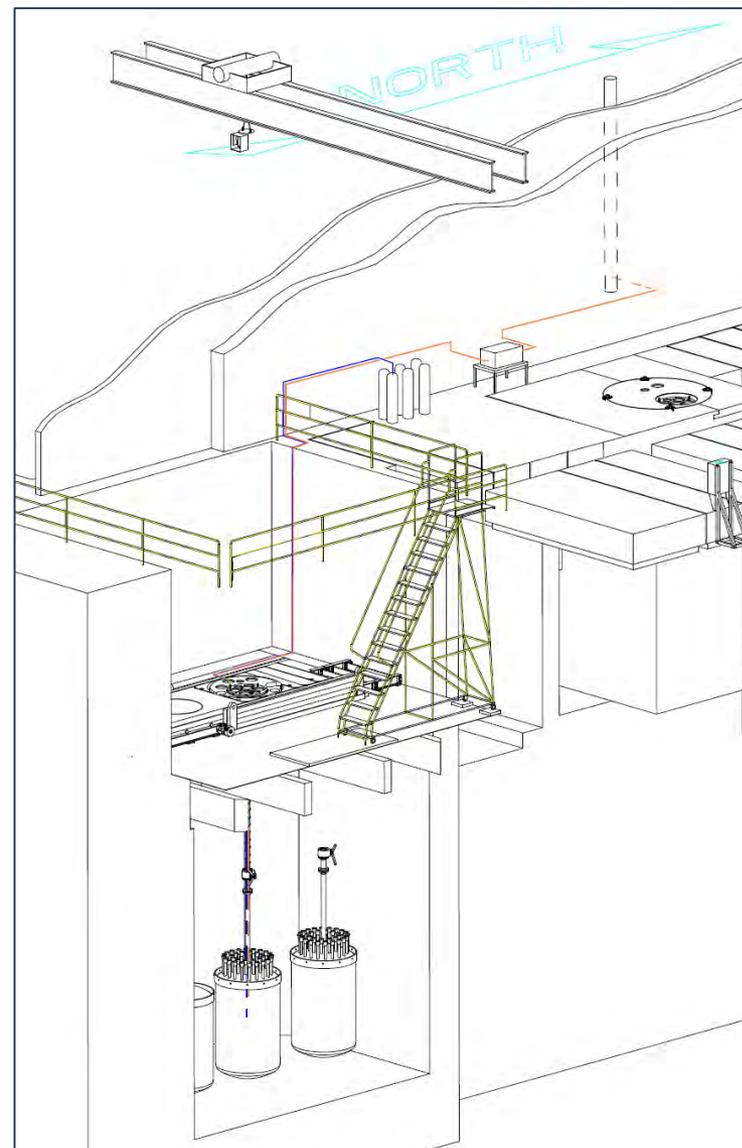
The Continuous Purge System is currently in the design phase and is expected to be operational by 2021

- Replaces the current Reactive Gas Removal System
- Streamlines the removal of hazardous gas
 - Minimizes process piping, components, and potential failure points within facility
- Reduces facility hazards, maintenance, and oversight
 - Less potential areas of exposure to facility workers
 - Passive system with significantly less maintenance
 - Operations will be less frequent, simplified



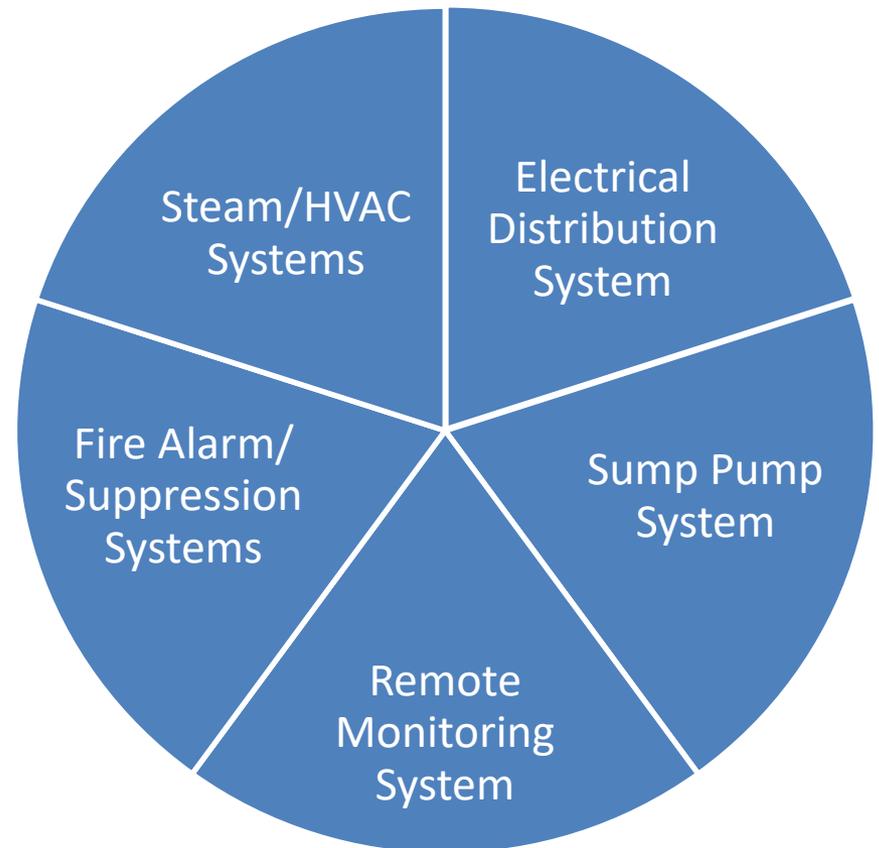
Continuous Purge System

- Headspace gas will be purged with inert gas (i.e. nitrogen)
- Continuous venting of gas from the tanks
- Chemical traps will no longer be required
- Will be a more “hands-off” system, fewer operating costs
- Designed and built with materials compatible with F_2



Updating and isolating utilities will allow MSRE to be maintained in a safe condition at reduced costs while awaiting final D&D

- Replacing aging electrical systems for critical components
- Installing new sump pump system to provide increased reliability
- Reducing heating costs by minimizing steam system
- Installing Remote Monitoring System for remote operations of new Continuous Purge System
- Upgrading fire alarm system and isolating fire suppression from office buildings



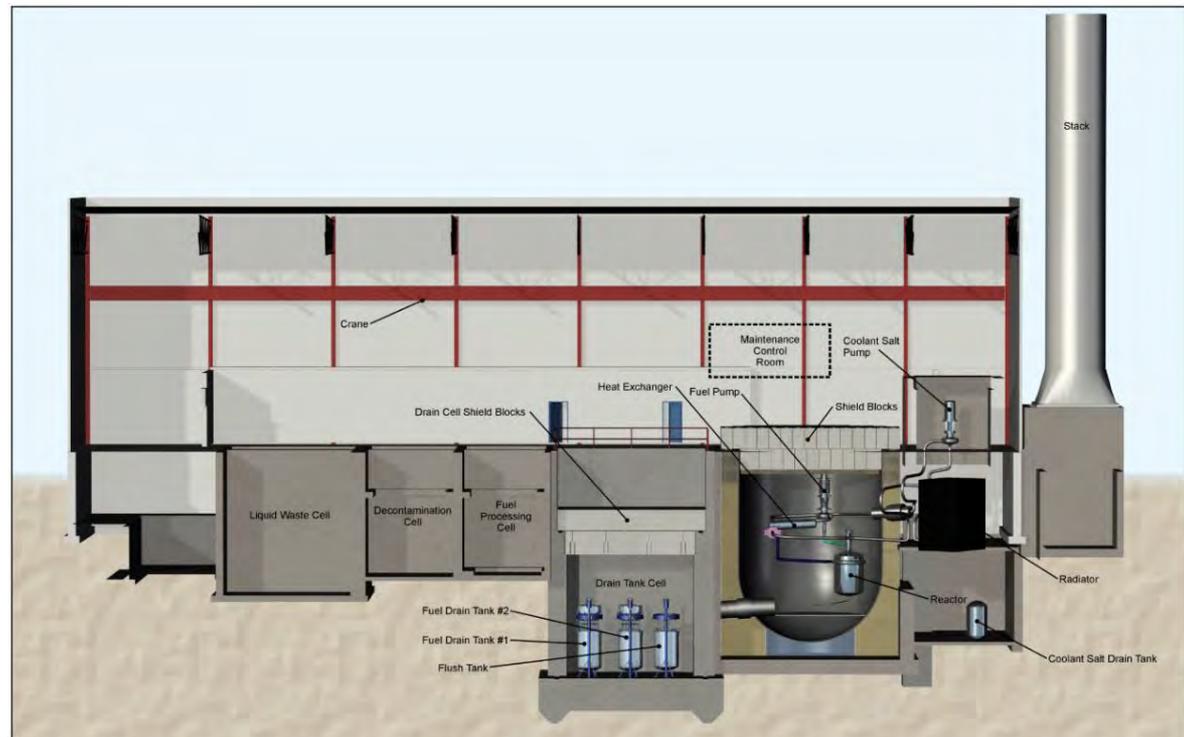
- Current CERCLA decision documents were completed in late 1990s:
 - 1996 Action Memorandum (DOE/OR/02-1488&D2)
 - Uranium deposit removal
 - 1998 Record of Decision (DOE/OR/02-1671&D2)
 - Treat and remove fuel and flush salts
- NRC has recognized entombment as a decommissioning option since the 1970s
- In-Situ Decommissioning Options were not significantly considered due to lack of evidence as a proven technology

OREM directed a conceptual analysis of In-Situ Decommissioning to determine if the option should be further evaluated

- Utilized Subject Matter Experts at Savannah River National Laboratory
- Evaluated ISD successes at other DOE Sites and ORNL
- Evaluation Criteria established:
 - Implementability
 - Protection of Human Health and Environment
 - Cost
 - Land Use Controls
- Joint DOE, EPA, and TDEC workshop held at Savannah River Site

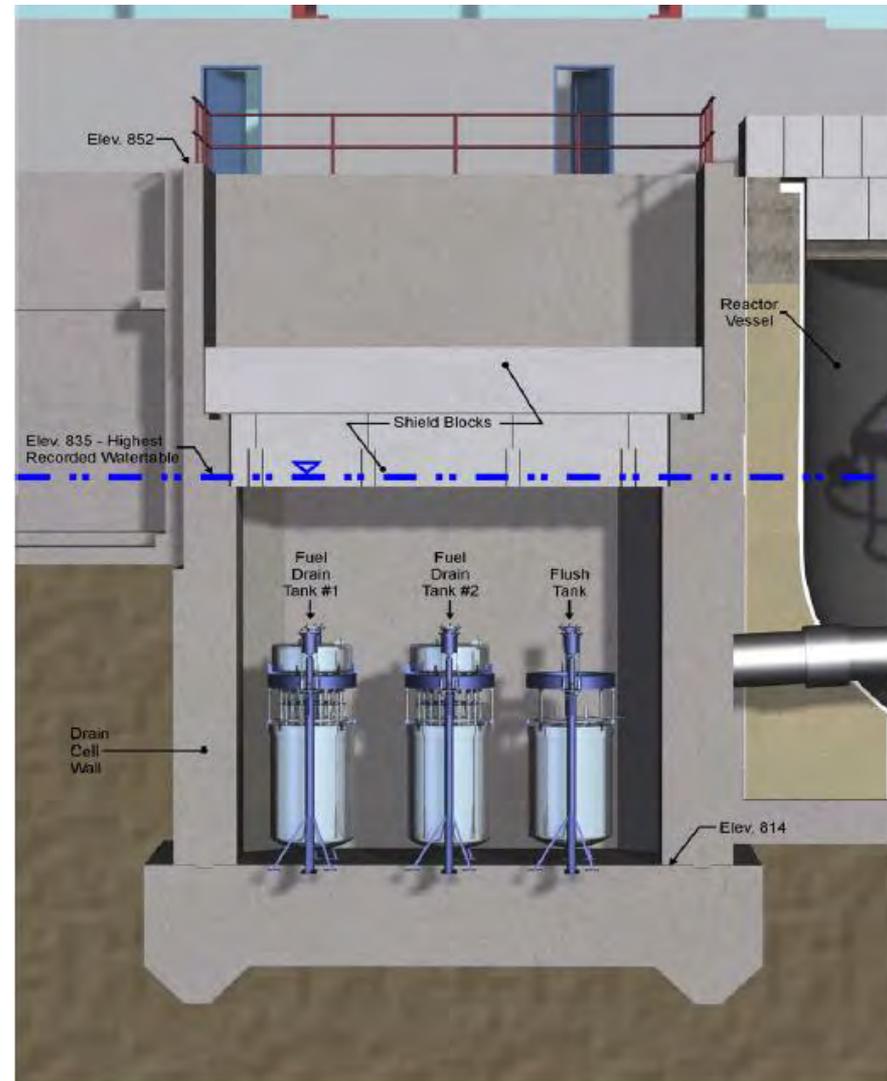
Next step planned is to conduct further evaluation in a revised CERCLA Feasibility Study, which may lead to a revision of the Record of Decision

- ISD at MSRE would consist of grouting or “entombing” the contaminated below-grade structures in the reactor building
- Entering the Feasibility Study planning process to:
 - Evaluate the unique hazards and structures at MSRE
 - Identify and locate the required data that will be necessary for the study
 - Consider potential supplementary treatment options



The update of the RI/FS will provide a thorough investigation to address:

- Options for extent of entombment
- Modelling of potential long-term releases
- Use of a “getter” material to capture fluorine
- Evaluation of grout materials to be used
- Monitoring systems required for long-term stewardship



Under an ISD option, recommended post-closure controls and monitoring would include:

- Site access controls
- Surveillance and maintenance
- Groundwater monitoring
- Air monitoring
- Land use controls

Questions???



Oak Ridge Site Specific Advisory Board

November

2019

Topic – Project Initiatives at MSRE

Issue group – Keebler, Lohmann, McCurdy

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--------|--------|---------|---------------------------------------------------------------------------------|------------------------------------------------|----------------------------|----------|
| | | | | | 1 | 2 |
| 3 | 4 | 5 | 6 Executive Committee meeting 5 p.m. | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 Board meeting 6 p.m. | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 EM/Stewardship Committee meeting CANCELED due to holiday | 28 Thanksgiving Day ORSSAB office closed | 29 ORSSAB office closed | 30 |

Meetings are at the DOE Information Center, Office of Science and Technical Information, 1 Science.gov Way, Oak Ridge unless noted otherwise.

ORSSAB Support Office: (865) 241-4583 or 241-4584 **DOE Information Center:** (865) 241-4780
ORSSAB Conference Call Line: (866) 659-1011; enter the participant code when prompted: 3634371#

| Board meetings on cable TV and YouTube | |
|---------------------------------------------------------|-------------------------------------------------------------------------------------|
| Knoxville: Charter Channel 6, Comcast Channel 12 | Sundays at 8 p.m. |
| Lenoir City: Charter Cable Channel 193 | Wednesdays, 4 p.m. |
| Oak Ridge: Channel 12 | Fourth Mondays, 7 p.m. |
| Oak Ridge: Channel 15 | Monday, Wednesday, Friday, 8 a.m. & noon |
| YouTube | http://www.youtube.com/user/ORSSAB |



Oak Ridge Site Specific Advisory Board

December (draft)

2019

Topic – N/A

Issue group – N/A

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--------|--------|---------|---------------------------------------------------------------------------------------------------|----------|--------|----------|
| 1 | 2 | 3 | 4 Executive Committee meeting CANCELED | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 Board meeting CANCELED | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 Christmas Day EM/Stewardship Committee meeting CANCELED ORSSAB office closed | 26 | 27 | 28 |
| 29 | 30 | 31 | | | | |

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Many Voices Working for the Community

Oak Ridge Site Specific Advisory Board

Monthly Meeting of the Oak Ridge Site Specific Advisory Board

Unapproved September 11, 2019, Meeting Minutes

The Oak Ridge Site Specific Advisory Board (ORSSAB) held its monthly meeting on Wednesday, September 11, 2019 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.

Members Present

Andrea Browning
Richard Burroughs,
Secretary
Sarah Eastburn (call-in)
Nannan Jiang
Shell Lohmann, Vice Chair

Harriett McCurdy
Marite Perez
Georgette Samaras
Bonnie Shoemaker
Fred Swindler
John Tapp

Rudy Weigel
Robert Whitaker
Amy Jones
Leon Shields (call-in)

Members Absent

Leon Baker
Bill Clark
Noah Keebler
Brooke Pitchers
Ed Trujillo
Dennis Wilson

Liaisons, Deputy Designated Federal Officer, and Alternates Present

Dave Adler, ORSSAB Deputy Federal Designated Officer, Department of Energy, Oak Ridge Office of Environmental Management (DOE-OREM)
Melyssa Noe, ORSSAB Alternate Deputy Designated Federal Officer (DDFO), OREM
Brian Henry, DOE, Y-12 Portfolio Federal Project Director
Kristof Czartoryski, Tennessee Department of Environment and Conservation (TDEC)
Connie Jones, U.S. Environmental Protection Agency (EPA) (call-in)

Others Present

Avi Duke, ORSSAB Student Representative, Oak Ridge High School
Roger Petrie, UCOR
Shelley Kimel, ORSSAB Support Office
Sara McManamy-Johnson, ORSSAB Support Office

3 members of the public were present.

Mr. Adler recognized incoming board members Andrea Browning, Amy Jones, Noah Keebler, Georgette

Samaras, and Robert Whitaker, and new student representative Avigail “Avi” Duke, a senior at Oak Ridge High School.

Liaison Comments

Mr. Adler – None

Mr. Czartoryski – Mr. Czartoryski said TDEC’s Division of Remediation director, based in Nashville, was reassigned to oversee environmental cleanup and radioactive compliance activities in Oak Ridge. The new director for the division is Steve Sanders.

Ms. Jones – None

Presentation

Ms. Lohmann introduced board members to Mr. Henry for an Update on the Outfall 200 Mercury Treatment Facility (MTF) and Y-12 Excess Facilities (see Attachment 1).

Mr. Henry said the MTF is one of OREM’s key projects to enable future cleanup at Y-12. He gave background information about the challenges OREM faces regarding mercury in Oak Ridge, but he added that mercury is not just an Oak Ridge problem – it’s a global problem. He said there are rivers and lakes in all 50 states that have fish that exceed the EPA recommended levels of mercury. This problem, he said, is largely due to atmospheric depositions from coal-firing plants.

Next, Mr. Henry showed board members maps to illustrate the creeks around the reservation. Upper East Fork flows through Y-12 and exits at Station 17, and he said the Interim Record of Decision goal for mercury concentrations in water leaving Y-12 at Station 17 is 200 parts per trillion (ppt). The primary purpose of the MTF is to meet that goal, which has not been met yet.

There are four main buildings where mercury was used in the processes: Beta 4, Alpha 5, and Alpha 4, and Alpha 2, and these are in the west end of the site. A series of storm networks in this area daylight at Outfall 200, and OREM has determined that Outfall 200 would be the spot where most of the mercury flux in the area could be captured.

In the early days of Y-12, about 24 million pounds of mercury was brought to the site for operations. Of that amount, 2 million pounds is still unaccounted for, although about 700,000 pounds of that 2 million is estimated to have been lost to the environment.

Mr. Henry said work on the MTF has been going on for a long time. He said the estimated completion date three to five years ago was 2020-2021, however regulatory delays combined with added complexity to the design increased the timeline.

At the headworks, the water will be intercepted at the outfall, it will undergo grit separation, and it will be piped about 3,000 feet to the treatment site at the east end. Mr. Henry said the design was split up this way because there was not space at the headworks to also have the treatment site.

The treated water will be discharged into the Upper East Fork Poplar Creek.

Next, Mr. Henry described the planned treatment process for MTF. The purpose of the headworks site is collecting the water. The base flow of the creek is up to about 3,000 gallons per minute. That water will be collected in what will basically be base flow wet wells that will have pumps and grit separation. Additionally, though, the headworks will capture storm flows, which can get up to 40,000 gallons per minute. To help capture these increased storm flows, the facility will also include a 2-million-gallon

storage tank. He said that the first flush after a heavy rain is when a lot of the mercury is released.

Collected water will be piped down to the treatment plant, where the process is similar to a standard potable water treatment plant.

Next, Mr. Henry showed a video about MTF.

He then continued, adding that although the Interim ROD goal is 200 ppt, there's a State ambient water quality criteria of 51 ppt. He said mercury concentration goals are based on getting quantities down low enough to prevent accumulation in fish. He said safe levels for mercury in water is relative to what the water will be used for. He added that the federal drinking water standard is 2,000 ppt; 51 ppt is the quantity at which fish living in the water would be safe for humans to consume.

Mr. Henry said a lot of activity has occurred at the Outfall 200 MTF site, with early site preparations beginning in December 2017 and finished in January 2019. He said national security missions at Y-12 create challenges for the project.

The construction contract for MTF was awarded in December 2018 to APTIM – North Wind Construction with a four-year performance period. They are actively at the site working, he said. Excavations are underway at both the treatment plant site and headworks, and recent hot weather has proven beneficial that excavation work. He said the plan is to complete excavation at the headworks by November so concrete installation can begin before winter.

Mr. Henry said DOE commits to completing the project by September 2025. The project is not funding-constrained, so he said he anticipates completion by about June 2024. We could be operational late Dec. 2023 – early finish date mid-2023. Good weather and good contractor performance, we could be up sooner.

Next, Mr. Henry discussed risk-reduction accomplishments at Y-12. He said crews removed about 4 tons of mercury during risk-reduction activities at the West COLEX facility. During those activities, crews encountered challenges related to mercury vapors but were able to use those challenges to identify processes to use moving forward. Additionally, he said, crews installed geo-membrane liners in the facility's footprint to prevent rainwater infiltration.

Another accomplishment Mr. Henry cited related to about 4,000 cubic-yards of soil that was being held in the Disposal Area Remedial Action (DARA) Soils Storage Facility. He said OREM worked with regulators to re-characterize, segregate, and use the existing onsite disposal facility for the majority of the soils, resulting in significant cost savings.

Next, Mr. Henry said Congress began providing excess facilities risk-reduction funding in FY 16, and OREM began characterization activities on the Biology Complex at Y-12 with that funding. In FY 18, Congress provided \$125 million to fully fund removing those buildings and cleaning up the soils, so deactivation and decontamination is currently underway at the Biology Complex.

After the presentation, board members asked the following questions:

- Mr. Weigel asked whether sludge pits containing mercury by Alpha 4 have been clean up and filled in.
 - Mr. Henry said he was not aware of sludge pits, but he would check on that. He said the area he knows of is the Alpha 2 basement and an area outside of Alpha 2 at the Big Springs Water Treatment Plant.

- Mr. Jiang asked whether the MTF will differentiate based on methylation of the mercury.
 - Mr. Henry said Upper East Fork Poplar Creek is almost entirely elemental mercury. He said within Y-12 and the upper reaches outside the main plant is elemental mercury. Further down the creek and at the Lower East Fork Poplar Creek is where the levels of methylmercury increases.
- Mr. Jiang then asked what happens to the mercury after the treatment.
 - Mr. Henry said the MTF basically removes the solids from the water. The solids become sludge and are dried. He said the resulting sludge should not be considered characteristically hazardous waste.
- Mr. Swindler asked if there are any commercial outlets for the captured mercury.
 - Mr. Henry said there is currently a mercury export ban and there are more than 1,200 metric tons of very clean mercury stored at Y-12. He said that option has been explored, and there's a lot just being stored. There's an effort to create a central storage repository for mercury, he said.
- Ms. McCurdy asked where that repository is located.
 - Mr. Henry said he wasn't sure whether that project was in a stage in which he could comment on it publicly. Mr. Adler said that, by his recollection, during initial discussions in Congress, Senator Lamar Alexander specifically said it would not be in Oak Ridge. Mr. Adler said Oak Ridge may end up being a storage location for its own mercury, but it would not be a repository for the nation's mercury.

Public Questions

- Mr. Luther Gibson said he had reviewed an Removal Action Memorandum written in 2010 for Y-12 facilities. He said there are several more excess facilities listed in it than were discussed during the current meeting, and he asked if they were excess facilities talked about during the presentation.
 - Mr. Henry said there are a lot of excess contaminated facilities, both at Y-12 and ORNL, and there is not currently enough funds to address. He said they are part of the lifecycle baseline planning for the cleanup of Y-12 and ORNL that will stretch out over the next several decades.
- Mr. Gibson next asked whether the Outside Storage Vault was on the list of facilities to be addressed.
 - Mr. Henry said the risk for that facility did not rise to the levels of some of the others, so it is on OREM's radar but not currently scheduled.
 - Mr. Wiegel added that there was a concrete slab, liner, and leachate added at that particular facility.

Public Comment

- Mr. Luther Gibson welcomed new student representative Avi Duke.

Board Business/Motions

1. None

Responses to Recommendations & Alternate DDFO Report

Ms. Noe said the FY 20 draft work plan has been assembled and is in the members' current meeting packets. She urged members to sign up for issue groups, particularly if interested in participating in the issue group for

October's meeting about U-233 processing. Next, she outlined a new process that will be used for issue groups. She added that ORSSAB's Budget Recommendation has been received by OREM and it has been sent to headquarters.

Ms. Noe then congratulated ORSSAB's new executives, Shell Lohmann, chair; Leon Shields, vice chair; and Bonnie Shoemaker, secretary.

Committee Reports

Executive – Ms. Lohmann said members recapped the Annual Planning Meeting and reviewed survey responses received. She said responses were generally very positive regarding the meeting, the facilities, and the board dinner. Executive members also discussed the FY 20 draft work plan and issue group plans.

EM & Stewardship – Ms. Lohmann presented the EM & Stewardship report for Mr. Shields, who was on travel. She said the most recent EM & Stewardship Committee meeting was in June, during which time members discussed the 2020 budget recommendation. She noted that was the recommendation Ms. Noe advised had been received at OREM, and she added ORSSAB should be receiving acknowledgement of that soon. She thanked everyone who participated in both in-person and email discussions for that recommendation. Mr. Shields added by phone that members interested serving as chair or vice chair on the EM & Stewardship Committee should notify staff.

Additions to the Agenda & Open Discussion

None

Action Items

Open

None

Closed

None

The meeting adjourned at 6:50 p.m.

I certify that these minutes are an accurate account of the September 11, 2019, meeting of the Oak Ridge Site Specific Advisory Board.

Michelle Lohmann, Chair
Oak Ridge
Site Specific Advisory Board

Bonnie Shoemaker, Secretary
Oak Ridge
Site Specific Advisory Board

ML/sbm



Many Voices Working for the Community

Oak Ridge Site Specific Advisory Board

Monthly Meeting of the Oak Ridge Site Specific Advisory Board

Unapproved October 9, 2019, Meeting Minutes

The Oak Ridge Site Specific Advisory Board (ORSSAB) held its monthly meeting on Wednesday, October 9, 2019 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.

Members Present

Leon Baker
Andrea Browning
Richard Burroughs
Sarah Eastburn
Amy Jones
Noah Keebler

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

Fred Swindler
John Tapp
Ed Trujillo
Robert Whitaker

Members Absent

Bill Clark
Marite Perez

Brooke Pitchers¹
Rudy Weigel

Dennis Wilson

¹Third consecutive absence

Liaisons, Deputy Designated Federal Officer, and Alternates Present

Dave Adler, ORSSAB Deputy Federal Designated Officer, DOE-OREM

Dennis Mayton, OREM

Melyssa Noe, ORSSAB Alternate Deputy Designated Federal Officer (DDFO), OREM

Kristof Czartoryski, Tennessee Department of Environment and Conservation (TDEC)

Carl Froede, U.S. Environmental Protection Agency (EPA) (call-in)

Others Present

Shelley Kimel, ORSSAB Support Office

Sara McManamy-Johnson, ORSSAB Support Office

Six members of the public were present.

Liaison Comments

Mr. Adler – Mr. Adler said the crews are now well into construction on the MTF at Y-12 National Security Complex (Y-12). He said that at East Tennessee Technology Park (ETTP) crews have met a couple of milestones – removing centrifuges and preparing for shipment out west. On the back of the site at the Barrier Plant, it has all been removed and re-contoured and will soon be a grassy field.

Mr. Czartoryski – None.

Mr. Froede – Mr. Froede said the dispute on the Environmental Management Disposal Facility (EMDF) remains at the administrator level and they are awaiting the decision.

Presentation

Mr. Shields introduced Dave Adler, presenter for the evening's topic on ETTP Groundwater Updates.

Mr. Adler said most of the surface work has been done, but there is still a lot of work to be done on the groundwater contamination and decisions need to be made.

Mr. Adler said OREM hopes to provide EPA and TDEC with a draft of a Feasibility Study Report for the Main Plant Area in November. That report, once it's finalized, will serve as the basis for making decisions on how to proceed with groundwater cleanup.

Next, he outlined the current timeline for upcoming groundwater cleanup activities at ETTP. Proposal for the Main Plant Area tentatively planned for April 2021.

After addressing Main Plant Area groundwater decisions, OREM will address groundwater contaminants in the K-31/K-33 site.

He said OREM has 471 groundwater monitoring wells at ETTP.

Next, Mr. Adler provided background information on groundwater investigations at ETTP's K-31/K-33 since 1987.

He said the results from the most recent sampling event at K-31/K-33 had somewhat encouraging results. Three wells indicated results slightly exceeding drinking water standards for antimony, chromium and nickel. He said groundwater use will be restricted in any case in the future, but the test results indicated heavy intervention will likely not be needed.

The majority of the contaminated groundwater at ETTP is located at the Main Plant Area at the site, he said, and he provided background on the groundwater investigations that have been conducted at the site since 1997. Currently, there are about 355 monitoring wells in place at the Main Plant Area, with wells concentrated in areas that were known to be sources of contamination, but also spread out to get an idea of the "big picture."

Multiple technical alternatives are being evaluated for remediation. He said a feasibility study was developed that looked at a range of alternatives for the set of different plumes on site. The list of technologies being evaluated was developed in collaboration with the EPA and TDEC, and he said a future presentation would delve more deeply into the details of those technologies.

OREM is working with TDEC and EPA to establish a final Record of Decision (ROD) for Main Plant Area groundwater to enable reindustrialization. He said aggressive intervention would lead to quicker results, but it would also be more costly.

In summary, Mr. Adler said OREM has completed multiple investigations to try to define the problem and is in a good position to make some decisions on what to do next.

After the presentation, board members asked the following questions:

- Mr. Swindler asked where the DNAPL fits into the groundwater investigations.
 - Mr. Adler said DNAPL contamination is present at ETTP, and it is one of the most challenging problems to solve.
- Mr. Swindler asked what risk DNAPL poses.
 - Mr. Adler said DNAPL was introduced in industry as solvents. The risk comes about when they enter into groundwater, they can cause toxicity. Some types are known carcinogens. He said he doesn't think there are any significant human health risks with it because nobody is drinking the water.
- Ms. Shoemaker asked what OREM's remediation goal is for the groundwater at ETTP in terms of target contaminant levels.
 - Mr. Adler said the law requires OREM to try to restore drinking water standards, so they will try to do so. However, that may not be possible and/or may not be possible within a reasonable time frame, so OREM will look at alternatives to get as close to that as possible, and they will also look at ways to prevent people from drinking the water. He said ultimately it would be the Proposed Plan, the Public Comment, and the Record of Decision that establish what the ultimate requirement will be.
- Ms. Shoemaker asked if OREM could later decide that there's nothing more that can be done and no more money should be spent on it.
 - At a minimum, OREM has to ensure everyone is out of harm's way, so that requires monitoring and use prohibitions. He said, though, that he believes there will be better results than that.
- Ms. Samaras asked how often the wells are monitored.
 - Mr. Adler said it varies. There have been times when there have been years between, and sometimes it's monitored quarterly. He said for the most part, quarterly to semi-annually.
- Mr. Trujillo asked if discussing the Feasibility Study indicates all the necessary testing is completed.
 - Mr. Adler said OREM thinks they are close to having the information needed to identify conceptual redial approaches and start making decisions. However, he said, more testing will be needed after the approach is selected in order to design the process.
- Mr. Trujillo asked whether there will be a long lapse of time between the Feasibility Study and the Record of Decision.
 - Mr. Adler said yes, it is a couple of years. Assuming there's not a requirement to go back and do additional investigation, it still is a multi-month process to complete a feasibility study.

- Mr. Trujillo asked whether the technologies will be judged based on just money.
 - Mr. Adler said money matters, but they also will be judged in terms of meeting legal requirements, time it takes to achieve cleanup objectives, how the remedy could affect future land use, etc.
- Mr. Trujillo asked whether the Feasibility Study would be used by several different contractors.
 - Mr. Adler said it's being developed by a team of contractors and it will be used by DOE, EPA, the State, and the public in selecting a remedy. Then, he said, new contractors will come in to implement whatever is selected.
- Mr. Trujillo asked whether institutional controls can be used to control risks while allowing OREM more time to finalize the Feasibility Study.
 - Mr. Adler said OREM will ensure safeguards are in place. He said the law places a preference on using technology and treatment to get things done as quickly as possible, but it is balanced by cost and other factors.
- Ms. Browning asked if monitoring areas are alternated, and how they are selected.
 - Mr. Adler said OREM works with EPA and TDEC to determine that.
- Mr. Shields asked whether any residents could be drinking unsafe water because contaminants had passed the wells undetected between well samplings.
 - Mr. Adler said he that was unlikely because there is extensive geologic isolation at ETTP.
- Ms. Amy Jones asked whether residents who have wells and are receiving OREM-provided public water access make their wells available OREM for testing purposes.
 - Mr. Adler said yes, they are. He said OREM spent a few hundred thousand dollars adding water lines to roads that have homes on them and then added the lateral lines to the homes and the water provided through those lines, and residents agreed to provide OREM with access to their wells.
 - Mr. Czartoryski said TDEC has conducted offsite residential well sampling in the past, however under DOE grants there is no money in the budget for it, so those projects are not currently performed.
 - In relation to presentation charts of the Cost and Remediation Time, Mr. Czartoryski added that regulators also look at effectiveness when looking at remedies.

Questions from the Public

Mr. Gibson asked Mr. Adler to comment on potential vapor intrusion risks at ETTP.

Mr. Adler said the issue is the concern that solvents in the groundwater can volatilize and migrate up through the soil column and become an exposure issue to people above ground. He said there are sites where that is an issue. However, he said OREM evaluated that concern at ETTP and volatile organics rising to the surface were not detected at the site. He added, though, that property transfer contracts for the site require safeguards be added to buildings if necessary.

Mr. Clasure asked how deep the wells are typically, and whether the lake levels influence the

groundwater table.

Mr. Adler said the lake level does influence the groundwater table. He said the wells vary in depth from 10s of feet to many 10s of feet.

Public Comment

Mr. Gibson said it had been 99 days since notice was posted that DOE intended to issue a draft Request for Proposal (RFP) for UCOR's expiring contract within 15 to 60 days of that date, July 2. Also, he said there's a report called the Oak Ridge Reservation Annual Site Environmental Report and there's a good section on ETTP that includes a little more detail on groundwater to go with Mr. Adler's presentation. I just wanted to bring it to your attention.

Board Business/Motions

1. Ms. Lohmann asked for a motion to approve the meeting agenda.
 - a. **10/9/19.1 Motion to approve the agenda**
Motion made and seconded. Motion passed unanimously.
2. Ms. Lohmann presented the August Annual Planning Meeting minutes and asked for a motion to approve.
 - a. **10/9/19.2 Motion to approve previous meeting minutes**
Motion made and seconded. Motion passed unanimously.
3. Mr. Shield asked for nominations for EM & Stewardship Committee officers. He said Ms. Jones and Mr. Trujillo had expressed their interest for the Chair positions. There were no other nominations from the floor. Mr. Trujillo withdrew, so Ms. Jones was selected unopposed. Mr. Tapp had expressed his interest previously, and there were no other nominations from the floor. Mr. Tapp was selected unopposed for Vice Chair.

Responses to Recommendations & Alternate DDFO Report

Ms. Noe said the response to Recommendation 245 is included in the meeting materials and has been emailed to members. She added that new member recruitment is underway and asked members to help share that information. Regarding issue groups, Ms. Noe said a recommendation is not necessary for the groundwater update topic, it was to help prepare members for the upcoming Feasibility Study draft due for release in November. She added that the response to Recommendation 245 Budget Recommendation that was received by the board was OREM's response and the board will also receive an official response from headquarters.

Committee Reports

Executive – Ms. Lohmann said members reviewed the response from DOE to Recommendation 245 and were pleased with the responses. She said members discussed progress on the annual recruitment campaign and prepared for the upcoming Chairs meeting in Idaho.

EM & Stewardship – Mr. Shields said member attendance during the September EM & Stewardship Committee meeting was too low to vote for committee officers, so members decided to hold the nominations and vote during

this evening's board meeting since the majority of committee members are also board members and all board members are committee members. Mr. Shields reminded members that the Chair and Vice Chair will meet early with issue group members for the month's topic.

Additions to the Agenda & Open Discussion

None

Action Items

Open

None

Closed

None

The meeting adjourned at 7:05 p.m.

I certify that these minutes are an accurate account of the October 9, 2019, meeting of the Oak Ridge Site Specific Advisory Board.

Bonnie Shoemaker, Secretary

Michelle Lohmann, Chair

DATE

Oak Ridge Site Specific Advisory Board

ML/sm

ENVIRONMENTAL MANAGEMENT SITE-SPECIFIC ADVISORY BOARD

CHAIRS MEETING RECOMMENDATION

October 30, 2019

Sun Valley, Idaho

Recommendation on Improving EM SSAB and Public Engagement in the DOE Environmental Management Budget Process

Each Department of Energy Office of Environmental Management (DOE-EM) site is unique in its stage of cleanup – some are smaller, some are closer to the end of their cleanup and some have decades to go. Because of the uniqueness, difference in size, complexity, Federal Facility Agreements and length of cleanup the level of budget detail needed by each board may be different.

The eight citizen advisory boards that make up the EM Site-Specific Advisory Board (SSAB) that provide recommendations, advice and public perspectives to their local DOE-EM management believe that it is important to provide well-informed and timely recommendations, advice and comments regarding priorities at their sites. In order to do that they need to have an adequate level of priority planning detail provided in time to deliberate, develop and transmit timely recommendations to their respective local DOE-EM management. Consideration of our recommendations while the local EM offices are developing their priorities and budget requests and prior to local offices transmitting their priorities and budget request to DOE-EM HQ is in the spirit of transparency and collaboration.

The EM SSAB recommends:

1. DOE engage the local boards that make up the EM SSAB in the December-January-February timeframe in the budget process to ensure adequate time for the boards to be able to provide informed advice/recommendations for submittal to their local DOE EM management for review and consideration as local priorities and budget requests are being developed.
2. Local EM site offices work with their advisory board early in the December-January-February timeframe to identify the level of priority and budget detail that each Board needs to discuss and develop informed

advice/recommendations in time for DOE consideration as they develop their budget request submittal to DOE-EM HQ. For larger sites with multiple cleanup actions the detail should include an integrated priority planning list that identifies those cleanup activities that would be delayed if funding levels are not sufficient or if unplanned/emerging issues must be addressed.

3. DOE-EM HQ relay to the local EM offices whatever guidance is required in the December-January-February timeframe to ensure that the information local advisory boards need in order to understand and develop priorities and budget advice, recommendations are submitted to local EM management for review and consideration prior to their budget request submittal to HQ deadlines.

Who We Are

The EM SSAB is the DOE-EM's most effective vehicle for fostering two-way communication between DOE-EM and the communities it serves. The EM program is the world's largest environmental cleanup program, and the EM SSAB its only citizen advisory board. For more than 20 years, the volunteer citizens of the EM SSAB have partnered with EM officials at both the local and national levels to ensure that the public has a meaningful voice in cleanup decisions.

Public participation is required/recommended as part of a number of environmental regulations. It is also good business practice, resulting in better decisions that often result in improved cleanup. Over the past two decades, EM SSAB members have volunteered over 48,000 hours of their time and submitted to EM officials over 1500 recommendations, 88% of which have been fully or partially implemented, resulting in improved cleanup decisions.

The EM SSAB comprises approximately 200 people from communities in Georgia, Idaho, Kentucky, Nevada, New Mexico, Ohio, Oregon, South Carolina, Tennessee and Washington. The Board is cumulatively representative of a stakeholder population totaling millions of people who are affected by generator sites, transportation routes and disposal sites. As we move forward, the EM SSAB welcomes the opportunity to highlight the value of this unique volunteer board and discuss its priorities during the months and years ahead.

ENVIRONMENTAL MANAGEMENT SITE-SPECIFIC ADVISORY BOARD

CHAIRS MEETING RECOMMENDATION

October 30, 2019
Sun Valley, Idaho

Recommendation on the Disposition and Transport of Nuclear Material

The Waste Isolation Pilot Project transport program has been incredibly successful in helping accomplish the task of safe movement of transuranic (TRU) waste, to Carlsbad, New Mexico, from multiple Department of Energy's Environmental Management (DOE-EM) sites, beginning in the spring of 1999.

As members of the EM Site-Specific Advisory Board (EM SSAB), we laud the collaborative work between DOE and the Western states in the development and execution of this plan and the ongoing cleanup, transportation and disposition of TRU waste and other shipments thus far. We understand that the program includes common sense elements that exceed regulatory requirements.

The EM SSAB Chairs agree that safe transport of waste material to its permanent disposition addresses one of the most important goals that the DOE-EM complex has undertaken. We urge you not to undervalue the importance of this program which will be needed far into the future in order to address remaining TRU at all DOE-EM sites.

DOE activities are funded by Congress through its annual appropriation process. Within that appropriation framework, DOE requests funds necessary to support long-term obligations within its statutory and regulatory requirements.

It is important to the EM SSAB Chairs that DOE-EM, when dispositioning waste off-site, strive to move all DOE-EM regulated waste material, including TRU waste, once to its final disposition.

We appreciate this opportunity to share our observations and applaud DOE-EM's continued focus on solutions for nuclear waste disposition and safe transport to permanent repositories.

It is recommended that DOE-EM:

- Prioritize development of final disposition sites with the goal of reducing the interim storage footprint at each of the sites.
- Specify Waste Acceptance Criteria for all forms of waste and Spent Nuclear Fuel in a manner that will allow all sites to proceed with waste processing confidently, efficiently, and without delay.
- Continue to insist on a compliant budget that will provide sufficient funding to act without delay, nor impediment, to prepare waste for shipment.
- Create a transportation program for the safe and uneventful shipment of all EM waste material.

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Department of Energy
Washington, DC 20585

October 24, 2019

Dennis Wilson, Chair
Oak Ridge Site Specific Advisory Board
P.O. Box 2001
Oak Ridge, Tennessee 37831

Dear Mr. Wilson:

Thank you for your August 26 letter sharing the Chairs' recommendations concerning the Department of Energy (DOE) Office of Environmental Management's (EM) review of cleanup milestones.

We appreciate the Chairs' engagement, and agree with the importance of a data dictionary that informs consistent tracking of regulatory compliance milestones across the EM complex, and providing public access to complex-wide information regarding the status of regulatory compliance commitments. EM has drafted a data dictionary as a guide for standardizing tracking regulatory compliance milestones and will implement this guidance through a pilot study. The results of the pilot are expected to inform and clarify best practices for tracking regulatory milestones and methods to publicly report on the results of compliance with these milestones. Additional information on the results of the pilot will be available next year.

EM appreciates your continued support of the EM environmental cleanup mission. If you have any questions, please contact Mr. David Borak, EM SSAB Designated Federal Officer, at (202) 586-9928, or Ms. Elizabeth A. Connell, Associate Principal Deputy Assistant Secretary for Regulatory and Policy Affairs, at (202) 586-0637.

Sincerely,

A handwritten signature in blue ink, appearing to read "William I. White".

William I. White
Senior Advisor for Environmental Management
to the Under Secretary for Science





Department of Energy

Washington, DC 20585

October 4, 2019

Dennis Wilson, Chair
Oak Ridge Site Specific Advisory Board
P.O. Box 2001
Oak Ridge, Tennessee 37831

Dear Mr. Wilson:

Thank you for your August 26 letter, providing the Environmental Management Site-Specific Advisory Board (EM SSAB) recommendations concerning improving the Office of Environmental Management's (EM) Science and Technology (S&T) Program. It is my understanding that the EM SSAB Chairs wish to respond to the National Academies of Sciences' (NAS) report, "Independent Assessment of Science and Technology for the Department of Energy's (DOE) Defense Environmental Cleanup Program" (2019), which assesses the success of the EM S&T program, a program that defines needs for near-term and out-year cleanup of radioactive material.

We appreciate the Chairs' engagement to ensure successful EM cleanup efforts. EM Headquarters has previously met with NAS representatives concerning this report. We were pleased to see that NAS, EM SSAB, and EM share a common interest with regard to the EM S&T program direction.

As we move forward with our EM Technology Development program, we plan to take the NAS and EM SSAB findings and recommendations into consideration. The first step taken to address the NAS and EM SSAB recommendations is understanding the current capital technology investment in the field. At this time, EM's Technology Development office at DOE-Headquarters is teaming with DOE-EM field offices to conduct an assessment of all technology development activities currently being sponsored, to determine if the projects are focused on addressing high-priority, near-term site needs. At the conclusion of each site review, recommendations will be made to the site office. In addition, we plan to host a meeting with the Advanced Research Projects Agency-Energy (ARPA-E) to discuss their involvement and make a determination on a path forward.

We are also requesting the Environmental Management Advisory Board to review the NAS Report and provide their recommendations on how to best utilize our limited resources to realign the S&T Program.

Please note that DOE continues to conduct internal analyses and evaluations of breakthrough solutions with technical merit to reduce risk, schedule, and cost that address implementation of those recommendations posed by the EM SSAB on the NAS report.



Thank you for your continued support of EM's environmental cleanup mission. If you have any questions, please contact Mr. David Borak, EM SSAB Designated Federal Officer, at (202) 586-9928, or Mr. Kurt Gerdes, Director for Technology Development, at (301) 903-7289.

Sincerely,



William I. White
Senior Advisor for Environmental Management
to the Under Secretary for Science

cc: Jeff Griffin, EM-3
Kurt Gerdes, EM-3.2
Elizabeth Connell, EM-4
Linda Suttora EM-4.3 (Acting)
David Borak, EM-4.32

EM Project Update

| ETTP | September | October |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Final ETTP Main Plant Area Groundwater ROD | | The Supplemental SAP for ETTP Residual Contamination (K-31/K-33 Area) was approved by the regulators. |
| Zone 1 Interim ROD | The PCCR for the Powerhouse Duct Bank was approved by the regulators. | The RAWP Addendum for the Powerhouse Vaults was approved by the regulators. |
| | | The RAWP Addendum for the Balance of Ecological Remedial Actions was submitted to the regulators for review/approval. |
| Zone 2 | The Technetium-99 project is 82 percent complete. | The Technetium-99 project is 91 percent complete. |
| | Crews continue removing and shipping concrete debris for the K-1037 facility. Approximately 90 percent of the slab is removed and approximately 48 percent of the related debris is disposed in local landfills. | The slab is demolished at Building K-1037 and 96 percent of the related debris is disposed in local landfills. Final site grading continues with 80 percent of the backfill and 60 percent of the topsoil placed. |
| | The WHP Addendum for Consolidated Soil and Waste Sites was submitted to the regulators for review/approval. | The WHP Addendum for Consolidated Soil and Waste Sites was approved by the regulators. |
| | Remediation activities were initiated in Exposure Unit Z2-37. | The SAP for EU Z2-23 was submitted to the regulators for review/approval. |
| | The PCCR for Exposure Unit Z2-15 was submitted to the regulators for review/approval. | |
| Remaining Facilities | ACM abatement is 83 percent complete on the Centrifuge Building K-1200. | ACM abatement is complete and hazardous/universal waste removal is 90 percent complete on the Centrifuge Building K-1200. |
| | Centrifuge machine disassembly is 13 percent complete and shipping is 6 percent complete in Building K-1210. | Hazardous/universal waste removal is 95 percent complete in Building K-1210. Centrifuge machine disassembly is 14 percent complete and shipping is 13 percent complete. |
| | Miscellaneous classified equipment removal is 95 percent complete in Building K-1220. | All deactivation activities are complete in Building K-1220. |
| | Crews continue processing and shipping demolition debris at Building K-1423. Approximately 95 percent of demolition waste disposal is complete. | The PCCR for K-1037 was submitted to the regulators for review/approval. |
| | Completed 40 percent of required sampling, 61 percent of universal waste removal, and two percent of internal asbestos abatement in Building K-1006. | Temporary power is installed in Building K-1006. Mechanical and electrical isolations are complete. Completed 64 percent of required sampling. Also completed 61 percent of universal waste removal and 6 percent of internal asbestos abatement. |
| | Began demolishing the Building K-631/K-131 slabs. Approximately 15 percent of the slabs are demolished. | Demolished 96 percent of the Building K-631/K-131 slabs and 76 percent of the associated debris is disposed in local landfills. |
| | The WHP Addendum for Centrifuge Equipment (K-1210/1220) was submitted to the regulators for review/approval. | Deactivation is complete and demolition is 28 percent complete in the Centrifuge Lab Area. |
| | The PCCR for Poplar Creek Facilities was submitted to the regulators for review/approval. | |

EM Project Update

| ETTP | September | October |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ETTP Historic Preservation | Completed the following building construction activities: installation of resin flooring and installation of bathroom fixtures. Tested fire alarm system. Evaluated, approved, and initiated the use of a mechanical glass handling device for installing glass panels and doors. Continued installation of interior storefronts. Initiated installation of wood doors and hardware. Completed the following site improvement activities: Installation of storm sewer equipment; rough grading; and installation of planters. Initiated excavation, forming, and pouring of sidewalks/curbs; excavation and installation of electrical duct banks; excavation and installation of light pole bases; and installation of light poles. | Continued installation vestibule frames and glass and began working punch list items. Continued excavation, forming, and pouring sidewalks/curbs. Began installation of landscaping. Received and began installation of exhibits and displays. |
| ORNL | September | October |
| Molten Salt Reactor Facility (MSRE) | <p>It was determined that facility upgrades to the MSRE facility would be prudent to maintain office space for future D&D work at ORNL.</p> <p>Completed the packaging and shipping of the MSRE probe glovebox to a disposal facility. Drain Tank Pit waste was prepared for shipment in the next few weeks.</p> | <p>Completed the Conceptual Design Report for the MSRE Continuous Purge System Project. The purpose of project is to substitute the current reactive gas removal system that was intended to operate for a few years almost two decades ago, with a streamlined and simplified process that takes into consideration the actual conditions of the reactor site.</p> <p>Initiated a familiarization walk-down of the facility for Kone Crane employees in preparation for the inspection and recertification of the larger 30-ton crane. This crane will be needed to complete the movement of large shields so that several Continuous Ventilation Project activities can be completed.</p> |
| U-233 Disposition | Initiated the Contractor Readiness Assessment for the OROP Campaign. This campaign will safely and securely disposition a portion of the uranium inventory currently stored in the Building 3019 Complex by dissolving, diluting, and solidifying those oxides in Building 2026 for low-level waste disposal. | <p>Preparing to enter the existing hot cells in Building 2026 to remove and dispose of legacy waste material. The hot cells will be used during the processing campaign to complete disposition of the remaining inventory of U-233 material stored in the Building 3019 Complex.</p> <p>Moved the first U-233 canister to be processed as part of the Oak Ridge Oxide Processing campaign from Building 3019 to Building 2026. The campaign is a key component of the OREM effort to safely process and disposition the remaining inventory of U-233 stored in the Building 3019 Complex.</p> |
| ORNL Facilities D&D | Attended the field demonstration for the unmanned aerial vehicle drone that will perform an inspection of the 3039 Stack at the Liquid and Gaseous Waste Operations (LGWO) facility. | The RAWP/WHP for the LGWO facility was submitted and approved by the regulators. |

EM Project Update

| ORNL | September | October |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ORNL Facilities D&D | The Solid Waste Storage Area (SWSA) 6 Equipment Storage Project progresses. It consists of preparing a fenced, level area where equipment, no longer needed at ETTP, can be safely stored until needed for ORNL D&D work. The storage area has received the first 10 loads of small equipment. | Completed the design of the Zeolite system and also the construction of the Zeolite tanks at the LGWO facility. The F-1007 Clarifier was demolished and the debris was removed and sent to disposal. |
| | An RAWP and Technical Memo (Attachment Q) for the ORNL Soils & Sediments concerning Buildings 3009, 3010-A, 3026-D, 3080, 3083, and 3107 was approved by the regulators. | |
| Y-12 | September | October |
| Outfall 200 Mercury Treatment Facility | Initiated collection of groundwater from the headworks excavation for sampling and analysis to support treatment or direct discharge determination. Specification-required submittals and requests for information continue to be received and processed. | Continued support to OREM sampling and analyzing treated groundwater at the headworks site. Continue to review and respond to specification-required OREM contractor submittals and requests for information. |
| Bear Creek Valley Ph. I ROD | | The PCCR for the Disposal Area Remedial Action (DARA) Soils was submitted to the regulators for review/approval. |
| Y-12 Facilities D&D | Asbestos abatement is 42 percent complete and universal waste removal is 25 percent complete in the Biology Complex. Interior construction elevator preparation is complete and exterior installation is in progress. | Exposure Unit (EU) 5 encompasses the ORNL Biology Complex. The boundary line between EU 5 and EU 3 was recently modified to support future ancillary construction activities associated with the planned lithium facility. A task order for additional characterization planning for the new EU 5 slabs and soils are was awarded to CTI, a small business contractor. |
| | Deactivation hazard abatement is 42 percent complete and deactivation waste is 25 percent complete in the Biology Complex. | All three transport hoists are complete and awaiting certification at the Biology Complex. Asbestos abatement is complete on the first floor of Building 9207 and active on the second floor. ACM abatement on the first floor is 56 percent complete. |
| | The Addenda for the Building 9201-5 Dust Collector and for the Building 9404-4,-4A, and 9720-92 demolition were approved by the regulators. | |
| Off-Site Cleanup/Waste Management | September | October |
| Transuranic Waste Processing Center (TWPC) | | North Wind was awarded the National Safety Council "Perfect Record Award" at TWPC for operating 335,185 employee hours without occupational injury or illness during CY 2018. |
| EMWMF | The FY 2019 PCCR D2 was completed and submitted to the regulators for approval. | |
| EMDF | The Phase 3 (Borrow Area) Characterization Report was submitted to the regulators for review/approval. | Regulators stated that they will not review the Phase 3 (Borrow Area) Characterization Report before the ROD. |

EM Project Update

| Off-Site Cleanup/Waste Management | September | October |
|-----------------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WRRP | | The 2019 Remediation Effectiveness Report D2 version was submitted to the regulators for approval. |
| | | The Bear Creek RAR Comprehensive Monitoring Plan (CMP) was approved by the regulators. |
| | | Three RAR CMPs were submitted to regulators that incorporated the agreed upon 2021 Five Year Review sampling. This sampling was already approved. |
| | | Held the 2021 Five Year Review planning meeting for Offsite (Clinch River/Poplar Creek, Lower Watts Bar Reservoir, and Lower East Fork Poplar Creek) with the regulators. |
| Public Involvement Plan | An Update to the Public Involvement Plan was submitted to the regulators. | |

Abbreviations/Acronyms List for Environmental Management Project Update

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

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

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

Travel Opportunities

| Meeting/Event | Dates | Location | Cost | Website |
|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| FY 2020 | | | | |
| 2019 Fall Chairs Meeting Requests: Lohmann, Shields, Shoemaker | Oct. 28-30, 2019 | Sun Valley, Idaho | NA | |
| Perma-Fix Nuclear Waste Management Forum Requests: | Dec. 2-4, 2019 | Nashville, TN | \$500 | https://ir.perma-fix.com/upcoming-events |
| EPA National Brownfields Conference Requests: Trujillo, Samaras | December 11-13, 2019 | Los Angeles, CA | \$200 | https://brownfields2019.org/ |
| Waste Management Symposium Requests: none | March 8-12, 2020 | Phoenix | \$1,235 | www.wmsym.org |
| 2020 Spring Chairs Meeting <i>Board officers preferred</i> | March 31-April 2, 2020 | Las Vegas, NV | NA | |
| National Environmental Justice Conference & Training Requests: | April 22-25, 2020 | Washington, D.C. | NA | http://thenejc.org |
| ORSSAB Annual Meeting <i>All members invited to attend</i> | TBD August 2020 | | NA | |
| RadWaste Summit Requests: | September 8-10, 2020 | | \$625 | http://www.radwastesummit.com/ |
| DOE National Cleanup Workshop Requests: | September 16-18, 2020 | Alexandria, VA | \$425 | www.cleanupworkshop.com |
| 2020 Fall Chairs Meeting <i>Board officers preferred</i> | TBD | Santa Fe, NM | NA | |
| EPA Community Involvement Training Requests: | TBD | | none | www.epa.gov/superfund/community-involvement-training-program-0 |
| Shaded trips are closed | Due to the complexity of approving and arranging government travel, please indicate your interest as soon as possible. High-interest events may book up to a year in advance. | | | |



FY 2020 Incoming Correspondence

| # | Date | To | From | Description | DOEIC, Notified board officers of receipt |
|---|-----------|----------------------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 1 | 10/1/2019 | Jones, EPA; Young, TDEC | Daffron & Japp, DOE | 7062 Final Transmittal of the Remedial Design Report/Remedial Action Work Plan for the Zone 1 K-770 Area at the East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2713&D1) | DOEIC, Notified board officers of receipt |
| 2 | 10/1/2019 | Jones, EPA; Young, TDEC | Henry & Japp, DOE | 7056- FINAL- Transmittal of the Phased Construction Completion Report for DARA Soils Removal and Disposal Y-12, Oak Ridge, TN DOE-OR-01-2836-D1 | DOEIC, Notified board officers of receipt |
| 3 | 9/27/2019 | Daffron, DOE | Awasthi & Brahmbatt, TDEC | Site Treatment Plan for Mixed Waste on the DOE ORR Annual Update Revision 23.0- Completion of Milestone to Report on Technical, Contractual and Regulatory Feasibility of Treating Dioxin and Furan Liquid-Phase Waste | DOEIC, Notified board officers of receipt |
| 4 | 9/30/2019 | Japp, DOE | Jones, EPA | EPA Approval for Department of Energy's (DOE) September 26, 2019, request for an extension, under Section XXX of the Oak Ridge Reservation Federal Facility Agreement (FFA), of the DI Record of Decision (ROD) for the Environmental Management Disposal Facility (EMDF) | DOEIC, Notified board officers of receipt |
| 5 | 9/30/2019 | Japp, DOE | Chaffins, EPA | EPA Approval: Phased Construction Completion Report for the Remediation of the Zone 1 Powerhouse Duct Bank, Oak Ridge, Tennessee (DOE/OR/01-2736&D2) | DOEIC, Notified board officers of receipt |
| 6 | 10/1/2019 | Japp, DOE | Jones, EPA | EPA Approval: Addendum to the Waste Handling Plan for the Consolidated Soil and Waste Sites Within Zone 2 at the East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2328&D1/A1) | DOEIC, Notified board officers of receipt |



FY 2020 Incoming Correspondence

| # | Date | To | From | Description | DOEIC, Notified board officers of receipt |
|----|-----------|-------------------------|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 7 | 10/1/2019 | McMillan, DOE | Awasthi & Brahmbatt, TDEC | 10-1-19 Site Treatment Plan for Mixed Waste on the U. S. Department of Energy Oak Ridge Reservation Annual Upgrade Revision 23.0- Milestone to Complete Modifications to the Future Shield Storage Building | DOEIC, Notified board officers of receipt |
| 8 | 10/1/2019 | Jones, EPA; Young, TDEC | Daffron & Japp, DOE | Transmittal of the Amendment to the Record of Decision for Interim Actions in Zone 1, K-770 Area Soil Cover, ETPP | DOEIC, Notified board officers of receipt |
| 9 | 10/2/2019 | Japp, DOE | Young, TDEC | Federal Facility Agreement Milestone Modification Request for the Environmental Management Disposal Facility Record of Decision | DOEIC, Notified board officers of receipt |
| 10 | 10/2/2019 | Japp, DOE | Young, TDEC | Remedial Action Work Plan/Waste Handling Plan for Liquid and Gaseous Waste Operations at the Oak Ridge National Laboratory, Oak Ridge, Tennessee: Facility and Equipment Deactivation/Small Scale Demolition (DOE/OR/01-2830&D1) | DOEIC, Notified board officers of receipt |
| 11 | 10/2/2019 | Japp, DOE | Young, TDEC | TDEC Comments RE: Exposure Unit Z2-25 Sampling & Analysis Plan, ETPP (DOE/OR/01-2813&D2) | DOEIC, Notified board officers of receipt |
| 12 | 10/3/2019 | Japp, DOE | Young, TDEC | Addendum to the Waste Handling Plan for the Consolidated Soil and Waste Sites Within Zone 2 at the East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2328&D1/A1) | DOEIC, Notified board officers of receipt |
| 13 | 10/7/2019 | Jones, EPA; Young, TDEC | Daffron & Japp, DOE | Transmittal of the Phased Construction Completion Report for Demolition of Building K-1037 Barrier Plant at the East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2829&D1) | DOEIC, Notified board officers of receipt |
| 14 | 10/4/2019 | ORSSAB | White, DOE | DOE Response to ORSSAB Recommendation #244 on Science and Technology | DOEIC, Notified board officers of receipt |



FY 2020 Incoming Correspondence

| # | Date | To | From | Description | DOEIC, Notified board officers of receipt |
|----|------------|----------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 15 | 10/10/2019 | Jones, EPA; Young, TDEC | Daffron & Japp, DOE | Final Transmittal of the Exposure Unit Z2-12 K-633 Area Sampling and Analysis Plan, East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2810&D2) | DOEIC, Notified board officers of receipt |
| 16 | 10/10/2019 | Jones, EPA; Young, TDEC | Daffron & Japp, DOE | Final Transmittal of the Phased Construction Completion Report for Ecological Remediation at Duct Island in Zone 1, East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2820&D2) | DOEIC, Notified board officers of receipt |
| 17 | 10/11/2019 | Jones, EPA; Young, TDEC | Daffron & Japp, DOE | Final Transmittal of the Phased Construction Completion Report for Demolition of the Central Neutralization Facility at the East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2782&D3) | DOEIC, Notified board officers of receipt |
| 18 | 10/8/2019 | Jones, EPA; Japp, DOE | Young, TDEC | Addendum to the Supplemental Sampling and Analysis Plan for East Tennessee Technology Park Sitewide Residual Contamination Remedial Investigation, Oak Ridge, Tennessee (DOE/OR/01-2749&D1/A1) | DOEIC, Notified board officers of receipt |
| 19 | 10/16/2019 | Japp, DOE | Young, TDEC | TDEC Comments: Addendum 2 To The Remedial Design Report/Remedial Action Work Plan For Zone 2 Soils, Slabs, And Subsurface Structures For The K-1203 Area Of Exposure Unit Z2-12 With Technical Memorandum At The East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2224&D5/A2) | DOEIC, Notified board officers of receipt |
| 20 | 10/16/2019 | Japp, DOE | Froede, EPA | Supplemental Sampling and Analysis Plan for East Tennessee Technology Park Sitewide Residual Contamination Remedial Investigation, Oak Ridge, Tennessee (DOE/OR/01-2749&D1/A1) | DOEIC, Notified board officers of receipt |



FY 2020 Incoming Correspondence

| # | Date | To | From | Description | DOEIC, Notified board officers of receipt |
|----|------------|-----------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 21 | 10/16/2019 | Japp, DOE | Young, TDEC | TDEC Approval Letter: Bear Creek Valley Watershed Remedial Action Report Comprehensive Monitoring Report (DOE/OR/01-2457&D4) | DOEIC, Notified board officers of receipt |
| 22 | 10/22/2019 | Japp, DOE | Froede, EPA | EPA Approval of FY19 Phased Construction Completion Report for the Oak Ridge Reservation EMWMF (DOE/OR/01-2818&D2) | DOEIC, Notified board officers of receipt |
| 23 | 10/22/2019 | Japp, DOE | Jones, EPA | EPA Approval of the Addendum for Remediation of Powerhouse Vaults to the Remedial Action Work Plan for Dynamic Verification Strategy for Zone 1 (DOE/OR/01-2182&D4/A1/R1) | DOEIC, Notified board officers of receipt |
| 24 | 10/22/2019 | Japp, DOE | Young, TDEC | Amendment to the Record of Decision for Interim Actions in Zone 1, K-770 Area Soil Cover, East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2796&D3) | DOEIC, Notified board officers of receipt |
| 25 | 10/22/2019 | Japp, DOE | Young, TDEC | TDEC Approval Letter - Addendum for Remediation of Powerhouse Vaults to the Remedial Action Work Plan for Dynamic Verification Strategy for Zone 1, East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2182&D4/A1/R1) | DOEIC, Notified board officers of receipt |
| 26 | 10/22/2019 | Japp, DOE | Young, TDEC | Amendment for Final Soil Response Actions to the Record of Decision for Interim Actions in Zone 1, East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2817&D1) | DOEIC, Notified board officers of receipt |
| 27 | 10/22/2019 | Japp, DOE | Froede, EPA | Fiscal Year 2019 Phased Construction Completion Report for the Oak Ridge Reservation Environmental Management Waste Management Facility (DOE/OR/01-2818&D2) | DOEIC, Notified board officers of receipt |



FY 2020 Incoming Correspondence

| # | Date | To | From | Description | DOEIC, Notified board officers of receipt |
|----|------------|----------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 28 | 10/22/2019 | Japp, DOE | Jones, EPA | Addendum for Remediation of Powerhouse Vaults to the Remedial Action Work Plan for Dynamic Verification Strategy, Zone 1, East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2182&D4/A1/R1) | DOEIC, Notified board officers of receipt |
| 29 | 10/23/2019 | Japp, DOE | Young, TDEC | Submittal of Proposed Changes to the Oak Ridge Reservation Federal Facility Agreement Appendix B and C Dated September 30, 2019 | DOEIC, Notified board officers of receipt |
| 30 | 10/23/2019 | Japp, DOE | Atashi, EPA | EPA comments on the Exposure Unit Z2-25 Sampling and Analysis Plan at ETPP (DOE/OR/01-2813& D2) | DOEIC, Notified board officers of receipt |
| 31 | 10/23/2019 | Jones, EPA; Young, TDEC | Henry & Japp, DOE | 7151 Final Federal Facility Agreement Milestone Extension Request for Environmental Management Disposal Facility Record of Decision and Follow-On Documents | DOEIC, Notified board officers of receipt |
| 32 | 10/23/2019 | Jones, EPA; Young, TDEC | Daffron & Japp, DOE | 7142 Final Submittal of Appendix L Sampling and Analysis Plan for No Further Action Characterization of Exposure Unit Z2-23, East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2224&D5/A1/R3) | DOEIC, Notified board officers of receipt |
| 33 | 10/29/2019 | Jones, EPA; Young, TDEC | Daffron & Japp, DOE | 7171 Final Transmittal of the Addendum for the Balance of Ecological Remedial Actions to the Remedial Action Work Plan Dynamic Verification Strategy for Zone 1, East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2182&D4/A3) | DOEIC, Notified board officers of receipt |
| 34 | 10/23/2019 | Japp, DOE | Atashi, EPA | EPA Comments: Exposure Unit Z2-25 Sampling and Analysis Plan, East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2813&D2) | DOEIC, Notified board officers of receipt |



FY 2020 Incoming Correspondence

| # | Date | To | From | Description | DOEIC, Notified board officers of receipt |
|----|------------|----------------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 35 | 10/24/2019 | ORSSAB | White, DOE | DOE Response to ORSSAB Recommendation #243 on Cleanup Milestones | DOEIC, Notified board officers of receipt |
| 36 | 10/28/2019 | Japp, DOE | Young, TDEC | TDEC Review of Fiscal Year 2019 Phased Construction Completion Report for the Oak Ridge Reservation Environmental Management Waste Management Facility (DOE/OR/01-2818&D2) | DOEIC, Notified board officers of receipt |
| 37 | 10/28/2019 | Japp, DOE | Young, TDEC | Federal Facility Agreement Milestone Extension Request for Environmental Management Disposal Facility Record of Decision and Follow-on Documents | DOEIC, Notified board officers of receipt |
| 38 | 10/28/2019 | Japp, DOE | Young, TDEC | TDEC Approval Letter - Addition of Facilities to the Action Memorandum for the Y-12 Facilities Non-Time-Critical Deactivation/Demolition Project, Oak Ridge, Tennessee (DOE/OR/01-2462&D2) | DOEIC, Notified board officers of receipt |
| 39 | 10/29/2019 | Japp, DOE | Young, TDEC | TDEC Comments RE: Phase 3 Borrow Areas Characterization Report for EMDF | DOEIC, Notified board officers of receipt |
| 40 | 10/30/2019 | Japp, DOE | Jones, EPA | EPA Response to Several EMDF Milestone Extension Requests | DOEIC, Notified board officers of receipt |
| 41 | 10/30/2019 | ORSSAB | Mullis, DOE | OREM Program Plan FY12-24: Biannual Update - Fall 2019 | DOEIC, Notified board officers of receipt |
| 42 | 10/31/2019 | Jones, EPA; Young, TDEC | Adler & Japp, DOE | FINAL- Transmittal of the 2018 Remediation Effectiveness Report for the U. S. Department of Energy Oak Ridge Reservation, Oak Ridge, Tennessee | DOEIC, Notified board officers of receipt |
| 43 | 10/31/2019 | Salyers, TDEC | Mullis, DOE | Response to TDEC Letter Requesting Submittal of Proposed Plans for Mercury Mixed Waste Treatment, Dated September 13, 2019 | DOEIC, Notified board officers of receipt |



FY 2020 Incoming Correspondence

| # | Date | To | From | Description | DOEIC, Notified board officers of receipt |
|----|-----------|----------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 44 | 11/4/2019 | Jones, EPA; Young, TDEC | Japp, DOE | 7203 Final Distribution of an Erratum to the Bear Creek Valley Administrative Watershed Remedial Action Report Comprehensive Monitoring Plan, Oak Ridge, Tennessee (DOE/OR/01-2457&D4) | DOEIC, Notified board officers of receipt |
| 45 | 11/5/2019 | Japp, DOE | Jones, EPA | EPA Comment Letter RE: EU Z2-12, K-633 Area Sampling and Analysis Plan, ETPP (DOE/OR/01-2810&D2) | DOEIC, Notified board officers of receipt |
| 46 | 11/6/2019 | Jones, EPA; Young, TDEC | Japp, DOE | 7213 Final Distribution of an Erratum to the Bethel Valley Administrative Watershed Remedial Action Report Comprehensive Monitoring Plan, Oak Ridge, Tennessee (DOE/OR/01-2478&D3) | DOEIC, Notified board officers of receipt |



Oak Ridge Site Specific Advisory Board

TRIP REPORT

- I. Name of Traveler:** Michelle (Shell) Lohmann
- II. Date(s) of Travel:** October 27 - 31, 2019
- III. Location of Meeting:** Sun Valley, Idaho
- IV. Name of Meeting:** Department of Energy - Environmental Management (DOE-EM) Site-Specific Advisory Board (SSAB) Chairs Meeting
- V. Purpose of Travel:**

As a SSAB Chair's group, provide site-specific updates, receive updates from DOE-EM and consider recommendations as a collective group for DOE-EM to consider in support of the environmental management clean-up efforts across facilities.

VI. Discussion of Meeting:

The two and one-half day meeting began with a tour of Idaho National Laboratory, which included stops at the Radioactive Waste Management Complex (RWMC) to remotely observe the buried waste retrieval (RCT) and the Advanced Mixed Waste Treatment Facility (TSA/RE), visits to EBR-1, and the Advanced Test Reactor, at which we received a briefing and were able to observe operations including a loading/unloading operation, and lastly the Integrated Waste Treatment Unit, including observation of the calcine bins and the TMI spent fuel storage facility.

Day Two:

Day two (10/29) began with opening remarks from Jack Zimmerman, Deputy Manager for the Idaho Cleanup Project, and David Borak, EM SSAB Designated Federal Officer. Specifically, in

Mr. Borak's remarks, he set the stage for the meeting discussion to be focused at the complex-wide level to look at issues that have broad impact across the facilities regardless of location.

An EM program update was provided by Todd Shrader (EM-2).

- Mr. Shrader remarked on the progress that has been made over the last thirty years, citing the work to reduce sites with clean up efforts ongoing from 107 to 17 during that time.
- He remarked that funding for FY 2020 generally looked favorable, with work focused on end-state contracting, and the need to show success on efforts to continue to receive funding at recent levels.
- There was also some discussion regarding interdependencies regarding transuranic waste (TRU) regarding INL waste capabilities and shipping decisions including risk assessment and state drive regulations.

Chairs conducted a round robin session, providing high level updates regarding recent activities and accomplishments as well as FY 2020 focus areas for each SSAB site.

An update on the budget was provided by Robin Osik, Budget Analyst, DOE-EM.

After lunch, we received a Waste Disposition Update from Betsy Connell, Associate Principal Deputy Assistant Secretary for the Office of Regulatory and Policy Affairs. Ms. Connell provided a comprehensive update on many activities, which provided a better understanding for the group to the complexity that drives decisions organizationally.

Ken Niles, Assistant Director of the Oregon DOE – Office of Nuclear Safety and Energy Emergency Preparedness, gave a short quiz to the group on nuclear safety and proceeded to deliver a presentation on DOE transportation planning.

- Much of Ken's talk focused on driver requirements and additional training, with insight into incidents and accidents that have occurred during the transport of DOE waste and how well the transport program has operated and delivered on its mission to-date.
- His presentation gave us a more comprehensive feel for how we should think about draft chair's recommendation #3 (as noted below).

To close-out the afternoon, we reviewed three draft chair's recommendations for consideration. The three proposed recommendations were as follows:

1. Recommendation on Improving EM SSAB and Public Engagement in the DOE EM Budget Process
2. Recommendation on the Disposition and Transport of Nuclear Material
3. Recommendation on Infrastructure Improvement

Day Three:

Day three (10/30) was comprised of an update on DOE headquarter news from David Borak, a public comment period, recommendation development finalization activities, and closing remarks were shared by the group before departure.

DOE HQ News: There is a comprehensive review taking place relative to DOE-EM workforce planning/staffing.

- With an emphasis on accelerating the environmental cleanup effort to completion and closure, the organization is reviewing how other federal agencies close sites while also considering how to best provide assistance to the workers being impacted by site closures.
- Consideration is also being given to the establishment of something similar to an Office of Economic Adjustment, which other federal agencies have in place.
- DOE-EM is looking to put together a management plan for technology developments that occur as a result and in support of environmental cleanup efforts. DOE-EM is also looking at how other federal agencies capture this information, i.e. criteria captured, tracking of milestones, etc.

Public Comment Period: A public comment period was observed. One comment came forward by a member of the public who also identified himself as a SSAB board member.

Recommendation Finalization: The Chairs agreed by majority to proceed with two of three proposed chair's recommendations to DOE-EM. A third recommendation was discussed regarding infrastructure improvements; however, the primary concerns expressed in the recommendation were tied to infrastructure that is managed by other federal agencies. With no decision authority related to these government assets, it was decided not to proceed with this recommendation.

A summary of the verbatim recommendations captured for each of the two finalized chair's recommendations is provided below:

#1 - EM SSAB and Public Engagement in the DOE EM Budget Process

It is recommended that DOE-EM:

1. DOE engage the local boards that make up the EM SSAB in the December-January-February timeframe in the budget process to ensure adequate time for the boards to be able to provide informed advice/recommendations for submittal to their local DOE EM management for review and consideration as local priorities and budget requests are being developed.
2. Local EM site offices work with their advisory board early in the December-January-February timeframe to identify the level of priority and budget detail that each Board needs to discuss and develop informed advice/recommendations in time for DOE consideration as they develop their budget request submittal to DOE-EM HQ. For larger sites with multiple cleanup actions the detail should include an integrated priority planning list that identifies those cleanup activities that would be delayed if funding levels are not sufficient or if unplanned/emerging issues must be addressed.

3. DOE-EM HQ relay to the local EM offices whatever guidance is required in the December-January-February timeframe to ensure that the information local advisory boards need in order to understand and develop priorities and budget advice, recommendations are submitted to local EM management for review and consideration prior to their budget request submittal to HQ deadlines.

#2 - Recommendation on the Disposition and Transport of Nuclear Material

It is recommended that DOE-EM:

1. Prioritize development of final disposition sites with the goal of reducing the interim storage footprint at each of the sites.
2. Specify Waste Acceptance Criteria for all forms of waste and Spent Nuclear Fuel in a manner that will allow all sites to proceed with waste processing confidently, efficiently, and without delay.
3. Continue to insist on a compliant budget that will provide sufficient funding to act without delay, nor impediment, to prepare waste for shipment.
4. Create a transportation program for the safe and uneventful shipment of all EM waste material.

Finalized versions of the recommendations were provided to the Chairs on Monday, 11/4 to take back to our respective SSAB boards to discuss and for vote in short order.

VII. Significance to ORSSAB:

This trip provided me a broader perspective on all of the work that is happening across the complexes related to the DOE-EM cleanup mission. The information we received in briefings from all of the speakers noted within my report were helpful in shaping my thoughts and opinions about the challenges the sites face and how to think a bit more strategically about the challenges we face not only in Oak Ridge but as well as the prioritization of the challenges across the complex. I found the dialogue, both with speakers and executives from other boards, to be valuable and a worthwhile endeavor.

VIII. Names & Telephone Numbers of Significant Contacts:

<Attendee names to be supplied by Staff>

IX. Action Items:

Note any outstanding actions from meeting or conference here (e.g., if you promised to send someone some ORSSAB information or if they promised to send you meeting materials).....

X. Traveler's Signature & Date:

Signature: ___ (via e-mail)_____

Date: 11/08/2019