

Oak Ridge Site Specific Advisory Board Monthly Meeting



Wednesday, June 12, 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.

CONTENTS

AGENDA

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

CALENDARS

1. June
2. July (*draft*)

BOARD MINUTES/RECOMMENDATIONS & MOTIONS

1. April 10, 2019 unapproved meeting minutes
2. EMSSAB Chairs Draft Recommendation #1 on EM's Review of Cleanup Milestones
3. EMSSAB Chairs Draft Recommendation #2 on Improving EM's Science and Technology Program

REPORTS & MEMOS

1. Trip Reports—EMSSAB Spring Chairs Meeting (D. Wilson, S. McManamy-Johnson);
National Environmental Justice Conference (L. Shields)
2. EM Project Update and Abbreviations
3. Travel Opportunities for FY 2019
4. Incoming Correspondence

Alan Stokes, Director, Planning and Execution Division



Alan Stokes serves as Director of the Planning and Execution Division for the Oak Ridge Office of Environmental Management. He is responsible for overseeing the planning and execution of cleanup at Oak Ridge's three primary sites.

His oversight also includes strategic planning, life cycle baseline development and configuration control, contractor earned value management system validation, integration, analysis and reporting of contractor cost and schedule performance, budget development, and fund management.

He has lead two major updates to the Oak Ridge Environmental Management life cycle baseline, oversaw the development of a modeling tool to facilitate strategic planning and budget development and participated as the

Oak Ridge representative on a peer team that reviewed the Environmental Management budgets at each DOE site.

Alan has 30 years of experience in contract management, project management and financial management. He has been with OREM for 20 years, and previously served as the Deputy Director for the Division. Alan is a Certified Public Accountant and received a bachelor's degree in accounting from Florida State University.



Oak Ridge Site Specific Advisory Board
Wednesday, June 12, 2019, 6:00 p.m.
DOE Information Center
1 Science.Gov Way, Oak Ridge, TN 37831

AGENDA

- I. Welcome and Announcements (D. Wilson) 6:00–6:15
 - A. No July meeting – New members will receive a tour of the ORR; current members welcome.
Send email to orssab@orem.doe.gov with interest.
 - B. Presentation of Service Awards to Outgoing Board Members (J. Mullis)

- II. Comments from Federal and State Agency Representatives
(J. Mullis, C. Jones, K. Czartoryski) 6:15–6:20

- III. Presentation: OREM’s FY21 Budget and Priorities (A. Stokes) 6:20–6:40
Issue Group: Price, Trujillo, Wilson

Questions regarding the presentation 6:40–6:50
 - i. Board members
 - ii. Public - *Please use the microphone so questions about the presentation can be documented for the meeting record.*

- IV. Public Comment Period (D. Wilson) 6:50-7:00
Please use the microphone so comments for the board or DOE can be documented for the meeting record.

- V. Call for Additions/Approval of Agenda (D. Wilson)..... 7:00
 - A. Requests for New Action Items
 - B. Next Meeting: Saturday, August 24, 2019
Presentation: Potential FY2020 topics from federal and state agency liaisons
***Member RSVP required to staff by Monday, July 8.**

- VI. Board Business..... 7:05–7:15
 - Old business*
 - A. Motion to Approve: April 10, 2019 Meeting Minutes (R. Burroughs)

 - New business*
 - A. Selection of Nominating Committee for FY2020 officers (D. Wilson)
Minimum 3 members who are not current officers
 - B. Voting on Recommendations from the EMSSAB Chairs Meeting (D. Wilson)
 - i. Recommendation on EM’s Review of Cleanup Milestones
 - ii. Recommendation on Improving EM’s Science and Technology Program

- VII. Responses to Recommendations & Alternate DDFO’s Report (M. Noe)..... 7:15–7:20

- VIII. Committee Reports 7:20–7:25
 - A. Executive (D. Wilson)
 - B. EM/Stewardship (L. Shields)

- IX. Additions to Agenda & Open Discussion 7:25–7:30

- X. Adjourn 7:30



Oak Ridge Site Specific Advisory Board

July (draft)

2019

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<i>New Member Tour – Date TBD</i>	1	2	3	4 Independence Day – Board Offices Closed	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

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	
Community TV Knoxville channels: AT&T – 99, Charter – 193, Comcast - 12, WOW! - 6	Sunday at 8 p.m.
Lenoir City: Charter Cable Channel 193	Wednesday at 4 p.m.
BBB Communications Oak Ridge: Channel 12	Fourth Mondays, 7 p.m.
Oak Ridge Schools: Channel 15	Monday, Wednesday, Friday, 8 a.m. & noon
YouTube	http://www.youtube.com/user/ORSSAB



Oak Ridge Site Specific Advisory Board

June

2019

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5 Executive Committee 5 pm	6	7	8
9	10	11	12 Board Meeting 6 pm	13	14	15
16	17	18	19	20	21	22
23	24	25	26 EM/Stewardship 6 pm	27	28	29
30						

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Many Voices Working for the Community

Oak Ridge Site Specific Advisory Board

Monthly Meeting of the Oak Ridge Site Specific Advisory Board

Unapproved April 10, 2019, Meeting Minutes

The Oak Ridge Site Specific Advisory Board (ORSSAB) held its monthly meeting on Wednesday, April 10, 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 Shields
Nannan Jiang
Belinda Price
Richard Burroughs, Secretary
Bonnie Shoemaker

Bill Clark
Sarah Eastburn
Shell Lohmann, Vice Chair
Harriett McCurdy
Martha Deaderick

Marite Perez
Fred Swindler
John Tapp
Dennis Wilson, Chair

Members Absent

Leon Baker
Brooke Pitchers
Ed Trujillo

Rudy Weigel
David Branch
Eddie Holden

¹Second consecutive absence

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

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

Connie Jones, U.S. Environmental Protection Agency (EPA)

Others Present

Olivia Fleenor, ORSSAB student representative, Hardin Valley Academy

Shelley Kimel, ORSSAB Support Office

Sara McManamy-Johnson, ORSSAB Support Office

Bill McMillan, OREM Portfolio Federal Project Manager for Oak Ridge National Laboratory (ORNL)

Jasleen Narula, ORSSAB student representative, Oak Ridge High School

6 members of the public were present.

Mr. Wilson told members DOE scheduled its Community Budget Workshop for Wednesday, May 15, 2019 and encouraged them to attend. Ms. Noe said the time has been set for 4:30p.m.-6 p.m. at the 2714 building across the street from the Federal Building in Oak Ridge. She said public notices would be distributed in local media as well. Mr. Adler presented service awards to outgoing student representatives Olivia Fleenor and Jasleen Narula.

Liaison Comments

Mr. Adler – Mr. Adler said Mr. Mullis had recently visited Vanderbilt University and spoke with students who might be interested in the OREM program. OREM is making progress at ETTP and closing in on the 2020 goal for completing major cleanup. He noted that the 1037 building, one of the last large buildings remaining, is about 92% gone. OREM is scheduled to begin demolition on two remaining buildings at the Poplar Creek area. That area is promising for reuse after demolition and cleanup is complete because it is a large, flat area. The Poplar Creek facilities are also the most contaminated buildings that remain. The 1200 Complex, which is where the original centrifuge research took place, are also being prepared for takedown. They will probably be the last buildings removed because of the effort required to remove internal contents, he said, which is underway now.

Mr. Adler emphasized OREM is also working at the other two sites, Oak Ridge National Laboratory (ORNL), where risk reduction activities are ongoing, and Y-12 National Security Complex (Y-12), where waste management projects are being discussed and construction will soon begin on the Mercury Treatment Facility. He noted DOE is in formal dispute EPA and TDEC with related to water discharge limits at DOE facilities. He emphasized that “formal dispute” is a term under the three parties’ regulatory framework that indicates discussion and resolution is needed on an issue and should not be construed as a breakdown in the relationship. He said the dispute had been mentioned in some industry publications and clarified that all parties have identified their positions with respect to the dispute and it is now being discussed at higher levels among agency leaders. He said there is no risk at the facilities – rather it’s about the subtleties of how DOE sets standards for discharge.

Ms. Jones – had no formal comments, but agreed with what Mr. Adler said about the formal dispute.

Mr. Czartoryski – No comments.

Mr. Clark asked if the dispute was related to a radio announcement about a public meeting. Mr. Adler said no public meeting was scheduled on the topic.

Presentation

Ms. Lohman introduced board members to Bill McMillan, presenter for the evening’s topic, Extending Operational Life of Facilities & Reducing Surveillance & Maintenance Requirements at ORNL.

Mr. McMillan said operational facilities at the lab include the Liquid and Gaseous Waste Operations (LGWO), which treats liquid and gaseous waste from DOE’s Office of Science operations as well as legacy-contaminated groundwater and buildings now owned by OREM. There are also various types of facilities in standby awaiting demolition, such as old research reactors that have been defueled, but the reactor buildings are still there. Similarly, isotope research facilities have remaining hot cells with remaining residual materials. Other excess facilities include warehouses and storage buildings.

There are basically three treatment facilities in the LGWO program, he said. The Liquid Low-level Waste System manages radioactive waste water, primarily from the High Flux Isotope Reactor used by ORNL, but also some contaminated groundwater sources, and discharges from the gaseous waste system, among others. It includes an evaporator to remove the water and leave the residual material in a sludge format, which is safely stored in double-lined steel tanks in vaults to await final treatment. A new processing facility will be built in the next few years to handle that effort. The Process Waste System handles more benign, less-contaminated material like collected rain water in basement facilities, leachate from some of the landfill sites, etc. It processes 80 million to

100 million gallons of water a year. The Gaseous Waste System is the 250-foot brick stack at the center of the lab's campus. It filters air from excess facilities through high efficiency particulate air (HEPA) filters prior to release. It treats approximately 1.3 million cubic feet per day.

All LGWO systems operate safely within their permits, but OREM is experiencing increased maintenance from the aging infrastructure. The newest of the buildings are 30 years old and are past their design life, said McMillan. Many items are failing frequently and requiring significant non-routine maintenance. In addition, it is becoming difficult to find replacement parts for much of the systems. Over the last three to four years, he estimated, costs have increased for general maintenance at the lab about \$8 million per year. DOE has invested an additional \$5 million to \$10 million in that same timeframe to address LGWO upgrades to extend the life of the facilities.

Due to the increasing costs, a two-phase engineering evaluation was started on the facilities. The first phase, completed in 2016, looked at the infrastructure of the three systems in the LGWO infrastructure, and made recommendations on consolidating and making improvements to the systems. Phase two was completed in March 2019 and focused on the underground systems including piping and electrical systems. A summary document and long term strategic plan based on the results has been produced that identifies goals for upgrades and maintenance in the next three to four years.

Out of those evaluations, several goals were identified to upgrade the facilities with modern equipment that would make it more cost effective, efficient, reliable, and long-lasting. Several projects have been completed such as replacement of obsolete heat trace control panels, and removal of an unnecessary air stripper at the process plant, which allowed the installation of new equipment, and other repairs.

Ongoing projects include:

- motor control center replacements to modernize the equipment and replacements of three granular activated carbon (GAC) columns that filter water, both of which should be complete in the next few weeks;
- replacement of dual-media filters and piping to stop leaks and equipment failure;
- concrete dike repairs to fill cracks and other structural integrity repairs to address potential leaks - complete at a pump facility in Melton Valley and will be done in the next few years at Bethel Valley as well;
- relocation and replacement of the zeolite system at Building 3544, an older part of the Process Waste System which removes radionuclides – primarily cesium and strontium - from water. The move to Building 3608, a newer portion of the facility, will consolidate operations and allow for the eventual shutdown of Building 3544. This will eliminate significant maintenance costs at the old facility;

Planned projects include

- Minimizing feeds to the Liquid Low-level Wastewater System is a very high priority. A pretreatment system is planned for treating some of the most contaminated groundwater from Building 3517, and scrubber water from the off-gas scrubber at the 3039 stack. Those two components constitute over half of the feed to the Liquid Low-Level Waste Evaporator. The change will increase capacity for storage of sludge until the new processing plant is complete.
- Replacement of the Distributed Control System (obsolete electronics) for LGWO systems will help improve longevity of the operation.

Mr. McMillan showed a series of slides comparing pre- and post-upgrade images of facilities at ORNL including corrective maintenance, pipe replacement, dike repairs at Building 7961, the GAC columns, motor control center, and central off-gas equipment. Much of corrective maintenance involves corroded and leaky pipes. Many of the piping systems have been or are in the process of being upgraded/replaced. Additionally, the blower system that feeds the off-gas system has been powered by a steam turbine system. In June 2018 one of the turbines threw a blade and shut down the blower. New motors were put in with additional capacity and additional features. They have worked well enough that there is consideration to replace all the old steam turbines.

Mr. McMillan then moved on to discussion of projects at the Molten Salt Reactor Experiment (MSRE). MSRE was shut down in 1969. Molten salt technology used a heated fluorine salt solution to carry fuel through the reactor. About 10 years ago the reactor was shut down, all salts were drained, and the system was flushed. That material has since solidified in the tanks. Because of the radiolytic reactions within the salt, gasses are produced which must be pumped and treated every 6 months. Current activities focus on that periodic pumping. There is some concern about reliability of current electrical systems – during last year’s historic rains, the sump pumps failed and the facility basement flooded. Because of uncertainty in the circuitry in the building, the old circuitry is being disconnected and replaced. The new electrical system will have a dedicated line in the facility and new circuits provided to ensure reliable power to critical systems. The rest of the facility will then be disconnected from the existing electrical feeds and shut down. Circuits that control the replaced pumps will likewise be replaced. To control buildup of fluorine gas in the tanks, DOE is preparing to install a new system to continuously ventilate the fuel salt drain and flush tanks. The automated system will eliminate pressure risks and end the need for in-person monitoring. The people can be moved out of the facility to support other ORNL cleanup work, allowing those areas of the MSRE facility to be shut down. This will result in significant savings.

OREM is also deactivating other facilities in ORNL’s central campus:

- Building 3010 (Bulk Shielding Reactor) – It still has a water pool shielding activated metals. OREM is deactivating that facility for demolition in the next few years. All combustible materials have been removed, asbestos abatement completed, and now OREM is characterizing the remaining materials in the pool to determine disposition. Materials that are highly radioactive will be shipped out west for safe disposal.
- Building 3026 (Hot Cell Footprint) – Legacy material removal and characterization of three remaining facilities. Demolition is planned after characterization
- Building 3005 (Low-intensity Test Reactor) and Building 3042 (Oak Ridge Research Reactor) – Deactivation and demolition activities are also planned in the next few years.

All these facilities are in the same general area. OREM is working with DOE’s Office of Science to prioritize these to allow public access to the Graphite Reactor as part of the Manhattan Project Historical National Park. In addition, demolition of the reactor buildings are less complicated than the next cleanup priority – the ORNL isotope facilities. Plus, removal of the reactor buildings will give OREM more room to safely work on the isotope facilities. Eventually, these projects will open space for future mission needs at ORNL, particularly at the area currently occupied by Building 3026. Mr. McMillan showed some photos of Buildings 3010 and 3026. D&D was initiated on Building 3026 with American Recovery and Reinvestment Act funds. The remaining areas were deemed more contaminated than anticipated and funds would not allow completion at that time. The facility was stabilized and has been safely monitored under a surveillance and maintenance since.

After the presentation board members asked the following questions:

Ms. Shoemaker – Where do you send demolition waste?

Mr. McMillan – Low-activity radioactive waste is disposed of onsite at CERCLA landfills, while higher activity radioactive waste is shipped out west.

Mr. Wilson – Does the sludge storage have issues with corrosion and pumping in the future?

Mr. McMillan - The sludges have accumulated over the last 30-40 years; a couple thousand cubic meters of sludge. We know it’s settled and is a peanut-butter like consistency. The engineers are working on critical technologies to be tested during the design process for the processing facility. This summer a test area adjacent to ORNL will be used to test components of the planned facility. The goal is to remove the sludge and blend it with a supernate to make it easier to pump into larger tanks while it is characterized. It will then be mixed with grout and shipped to Nevada.

Mr. Wilson noted the other sites have sludge and does EM share its lesson learned?

Mr. McMillan – Yes, OREM has had extensive discussions with experts at Hanford and Savannah River who also have been handling similar sludge at their sites.

Mr. Swindler asked how HEPA filters used and maintained.

Mr. McMillan – differential pressures on the filters are monitored and filters are changed about every 10 years. The stack filters were changed last about three years ago, he said. When differential pressures across the filters increase, it indicates that the filters need to be changed.

Mr. Wilson asked for confirmation that MSRE had gotten a plus-up in funding.

Mr. McMillan - Yes, there was a plus-up of \$5 million per year into the budget planning for some of these surveillance and maintenance projects over the next few years. Plus ups were also done for LGWO life extension activities.

Public Comment

Luther Gibson presented comments on the previous presentation on mercury research and encouraged the board to do a recommendation on the topic. He also suggested a website, www.itrcweb.org, with resources for learning more about technology related to groundwater and other issues the board handles. Regarding the community budget workshop, he said some members of the Oak Ridge Coalition of Retired Employees would attend and ask questions about the East Tennessee Technology Park employees' pension plan. He also shared some concerns about reductions in OREM funding presented in the Trump Administration's planned budget.

Board Business/Motions

1. Mr. Wilson asked for a motion to approve the meeting agenda.
 - a. **4/10/19.1 Motion to approve the agenda**
Ms. Price approved, Ms. Shoemaker seconded. Motion passed unanimously.
2. Mr. Burroughs presented the previous month's meeting minutes and asked for a motion to approve.
 - a. **4/10/19.2 Motion to approve previous meeting minutes**
Mr. Shields moved, Ms. Price seconded. Motion passed unanimously.
3. Mr. Burroughs reported that he had attempted to reach Ms. Pitchers, who has been absent for the last two meetings. He said he would continue to try and contact her. No action was taken.
4. Ms. Lohmann asked board members to weigh in on priority topics for the next year for the board. These will be part of a presentation at the May Chairs meeting.
Mr. Clark asked for additional discussion of priorities on groundwater. He said he hoped the board would address groundwater issues aggressively in the coming year.
5. Mr. Wilson briefly summarized proposed changes to the board's bylaws and opened the floor for discussion or questions.
 - a. **4/10/19.3 Motion to approve bylaws changes**
Ms. Price Moved, Ms. Shoemaker seconded. Changes were approved as shown unanimously

Responses to Recommendations & Alternate DDFO Report

Ms. Noe said the draft package has received preliminary approval and is now moving through the official analysis by headquarters. She cautioned that this is the longest part of the approval process.

Ms. Noe noted that while a tour was not scheduled this month, but Mr. McMillan is open to a tour if possible before the EM Stewardship meeting. Members were encouraged to tell staff their interest in a tour as soon as possible. Additionally, since he had covered much of the ORNL portion of excess contaminated facilities, Mr.

McMillan would not return next month when that topic was scheduled; instead Mr. Henry would speak solely to Y-12 facilities.

Committee Reports

Executive – Mr. Wilson said the executives discussed new students coming in the next couple months. Also, DOE has agreed to the board’s request for additional information on the mercury treatment facility, which will be presented in September. The executives continue to prepare for the annual meeting in August.

EM & Stewardship – Mr. Shields said there was significant discussion regarding the mercury treatment technology work at ORNL.

Additions to the Agenda & Open Discussion

None

Action Items

Open

None.

Closed

1. DOE will provide additional information on construction schedule changes for the Mercury Treatment Facility. **Closed 4/4/19:** DOE has scheduled an update on the topic by Brian Henry to the board in October.

The meeting adjourned at 7:15 p.m.

I certify that these minutes are an accurate account of the April 10, 2019, meeting of the Oak Ridge Site Specific Advisory Board.

Richard Burroughs, Secretary

Dennis Wilson, Chair
Oak Ridge Site Specific Advisory Board
DW/smk

DATE

ENVIRONMENTAL MANAGEMENT SITE-SPECIFIC ADVISORY BOARD

CHAIRS MEETING RECOMMENDATION

May 9, 2019 - Augusta, Georgia

Recommendation #1 – EM’s Review of Cleanup Milestones

Background:

On February 14, 2019, the U.S. Government Accountability Office (GAO) published “DOE Should Take Actions to Improve Oversight of Cleanup Milestones” (GAO-19-207). The report found that DOE did not accurately track or report whether milestones were met, missed, or postponed. It also found that sites continually renegotiate milestones they are at risk of missing.

GAO recommended the Office of Environmental Management (EM) should update its policies and procedures to establish a standard definition of milestones, track original milestone dates as well as changes to its cleanup milestones, report annually to Congress on the status of its cleanup milestones, and conduct root cause analyses of missed or postponed milestones.

One of the ways that the local boards that make up the Environmental Management Site-Specific Advisory Board (EM SSAB) become informed about cleanup actions at their sites is tracking cleanup milestones. Milestone achievement, delays and change information should be shared with the local boards on a regular basis.

Recommendations:

1. The EM SSAB Chairs recommend EM create a complex-wide, consistently applied data dictionary for milestones terminology. The inconsistency in not applying the same criteria in DOE tracking of milestones results in confusion for the local boards and the EM SSAB Chairs as they meet to discuss cleanup issues and contemplate recommendations.
2. Local boards and the public should be able to access site-specific milestone information in a timely manner. Milestone information should contain the

rationale for identifying the type based on the data dictionary of milestones and detailed information about why a milestone will be advanced/delayed/postponed.

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

May 9, 2019 - Augusta, Georgia

Recommendation #2 – Improving EM’s Science and Technology Program

Background:

The Environmental Management Site-Specific Advisory Board (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 Defense Environmental Cleanup Program” (2019) which assesses the success of the EM Science and Technology (S&T) program; a program that defines needs for near-term and out-year cleanup of radioactive material. As Advisory Boards to DOE-EM, the EM SSAB Chairs collectively seek a continued EM focus on permanent reduction of risk to future human generations and the environment.

The EM SSAB Chairs agree to the need for a formal, open, transparent, quantifiable and integrated S&T program that is accessible, by everyone – scientists, regulators and the public. We also agree on the need for an aggressive, cohesive S&T program that can verify the success of selected remediation pathways by utilizing hard data in defense of chosen risk-informed cleanup decisions. We also see the need for a data-rich, user friendly and publicly accessible digital platform that is easily accessed and navigated by everyone.

Recommendations:

- 1. The EM SSAB Chairs support the development of a programmatically integrated, (under one identified EM government program) robust S&T effort that is fully funded in order to: a) identify and pursue development of the technologies necessary to successfully achieve risk based reduction of radiological and other hazardous waste material; b) to integrate decisions that are common between sites with similar remediation needs; c) to identify scientific challenges common to sites.**

Deferring cleanup to the future (by relying on the myth that there will be more money or other, cheaper remediation solutions) has never driven down cost of remediation, to date.

- 2. A portion of the technology development effort for the DOE-EM cleanup program should focus on breakthrough solutions and technologies that can substantially reduce cleanup costs, schedules and uncertainties as stated in the NAS report.**

- 3. The EM SSAB Chairs recommend exploring already developed, usable computer platforms to see if they are flexible enough to systematize verification of Best Practices decisions.**

At Hanford Nuclear Reservation, the PHOENIX Computer Platform has been in development both for the Richland side of the site (soil and groundwater remediation) and for the DOE Office of River Protection (in support of the safe configuration of the Tank Farms and building of the Waste Treatment Plant).

In development for eight years now, the Phoenix Platform is a data-rich base of maps, waste-site definition, characterization data and more. We wonder if a platform, such as this one, might not be adapted as a solution, programmatically, to address the need to define S&T needs and validate decisions.

It is clear that piecemeal, undocumented and scattered S&T efforts to date, have not served EM well, leaving the DOE-EM department potentially destined to not be able to identify common remediation needs from site to site, or worse, repeat testing of already pursued technologies that could not reach maturity.

- 4. The EM SSAB Chairs recommend EM explore the path of working with the Advanced Research Projects Agency-Energy (ARPA-E) office, coupled with public outreach and transparency to implement a directional shift towards better control.**

The culture and process of contracting must be changed. The reins of scientific need and technology development should reside in a government-identified and controlled structure of discipline that manages budgetary resources, delivery time expectations and mission scope. ARPA-E might be the solution to manage a breakthrough S&T development program for EM. ARPA-E focuses on technologies too early for private-sector investment. ARPA-E awardees are unique because they are developing entirely new ways to generate, store, and use energy.

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Oak Ridge Site Specific Advisory Board

TRIP REPORT

- I. **Name of Traveler:** Dennis Wilson
- II. **Date(s) of Travel:** May 7-9, 2019
- III. **Location of Meeting:** Augusta, GA
- IV. **Name of Meeting:** Spring 2019 SSAB Chairs Meeting
- V. **Purpose of Travel:** Attend meetings; tour Savannah River Site
- VI. **Discussion of Meeting:**

I was not able to join the May 7 Chairs' meeting participants tour of the U.S. Department of Energy's (DOE) Savannah River Site (SRS) and the Savannah River National Laboratory (SRNL). I traveled that day to Augusta to attend the subsequent meetings on May 8 and 9.

Meetings on May 8 and 9 featured presentations and Q&A sessions with DOE leadership, including: **Mark Gilbertson, DOE Principal Deputy Assistant Secretary; Steve Trischman, DOE Director of Budget and Program Planning; and Jeff Griffin, Associate Principal Deputy Assistant Secretary for Field Operations.**

This was **Mr. Gilbertson's** 30th anniversary with DOE where he started when Admiral Watkins became the Secretary of the Department of Energy. Under the Admiral's leadership the auspices of the DOE-EM program started with the lead from the 10 State Governors where nuclear waste handling and clean-up issues existed. (Ann White did not attend due to a budget hearing.)

- Progress across the EM Complex during those 30 years
 - Moved from 107 sites to 16 sites
 - Reduced EM's footprint from 3000 sq. mi. to 300 sq. mi.
 - 20 years of successful waste placement in WIPP
 - Working with the National Labs to develop a specific crown ether designed to extract waste from multiple matrices successful
- EM safety performance has greatly improved from early state
- Recent EM accomplishments.
 - SRS coal ash work completed ahead of schedule and under budget.
 - Facility D&D accomplishments at all sites.
 - Oak Ridge cleanup progress at ETTP coming to a final status.
 - Hanford progress, including sludge removal and second tunnel filled.
 - DOE move toward modern, completion-centric approach to cleanup.

- DOE efforts to increase transparency, especially as it relates to program milestones.
- DOE efforts to increase efficiency, especially through a shift toward end-state contracting.
 - Moving to a bid on Base and Model Tasking (EPA and DOD already use)
 - Differing than past practices and personnel
 - Truncate open book of detailed task by task approach and approvals
 - Hotel costs at the sites rationalized as much as possible and updated
- Plan for 10 years
 - Challenges the sites to think differently
 - Overall plan is in the works
 - Public input expected
- Cyber Security is a key issue for all of DOE – moving initiatives to the sites
- Recruiting for replacement of an aging workforce a key focus
- Integrated Priority Plan
 - Rolling Milestones used at OR
 - Pert Chart Approach – 3 yr. cycle
 - Executing one budget
 - Defending one budget
 - Planning one budget
- Liabilities – major emphasis from Ann White
 - Recognize liabilities and be transparent in assessment
 - National programs introduced to reduce total liabilities
 - Past support for liability reduction could have been stronger
- HLW redefinition about to be made public
 - Really only impacts 4 sites
 - Need for public transparency at each site impacted
 - Plutonium – address contamination through the air
 - Neptunium – use actual contamination levels
 - Technetium – improve capture and storage issues

Highlights from **Mr. Trischman's** review of the budgeting process and priorities included:

- An overview of the FY 2020 Congressional Budget Request for EM, including detailed funding breakdown to the site level.
- Total funding, \$6.469 billion is a decrease from FY 2019.
- Environmental Management (EM) is adopting a modern, completion-centric approach to cleanup.
- Highlights of each site's planned projects for FY 2020.
- \$429 million requested for Oak Ridge for FY 2020.
- Oak Ridge projects planned for FY 2020 include:
 - Complete demolition of 90% of East Tennessee Technology Park (ETTP) facilities.
 - Complete processing contact-handled and remote-handled legacy transuranic debris waste inventory.

- Complete construction of transuranic sludge processing test area.
- Complete preparation of Building 2026 for processing remaining U-233 material at Oak Ridge National Laboratory (ORNL).
- Complete second of four years of construction of the Mercury Treatment Facility (MTF).
- Complete preliminary design and early site preparation of On-Site Comprehensive Environmental Response, Compensation, and Liability Act Disposal Facility.
- Oak Ridge Reservation (ORR) Cleanup Contract End State Contract scheduled for award in FY 2020's third quarter incentivizes risk-based cleanup that reduces financial liability.

Highlights from **Mr. Griffin** included:

- Implementation of EM priorities in the field
 - End-state contracting
 - EM effort to renew/create an industry culture focused on completion
 - Two-step process provides EM with the flexibility to partner with industry and stakeholders to openly negotiate the right End States and regulatory framework to reach completion
 - Consistency in contract accountability
 - Performance Evaluation Measurement Plans (PEMPS) guidance
 - Fee Advisory Board
 - Safety, security and quality assurance (QA) changes
 - Streamline upcoming contracts to remove unnecessary safety, security and QA requirements while focusing on safety, not "how-to"
 - Partnering with contractors for Contractor Assurance System reviews
 - Improve sharing of lessons learned and best practices in safety and QA across the Enterprise
 - Technology development (TD)
 - Establish a Program Management process (Selection, Prioritization, and Portfolio Management)
 - Align TD efforts with EM priorities and schedules
 - Include all TD funded activities (site- and HQ-funded)
 - Incorporate recommendations from the National Academies Independent Assessment, as appropriate
 - Opportunities for accelerating work
 - EM is conducting analyses to identify opportunities for site closure, proposed cleanup activity sequencing, means to reduce environmental liability
- EM goals for 2019
 - Oak Ridge - Demolish Building K-1037 later this year
 - Moab - Increase shipments of contaminated soil to 4 trains per week
 - WIPP - Work on the new underground air ventilation system
 - Los Alamos - Install and monitor well for the Chromium Project
 - Savannah River - Tank Closure Cesium Removal treatment unit operation
 - Richland - Complete demolition of the Plutonium Finishing Plant

- Idaho - Conduct full-scale retrieval demo of calcine waste from the storage bins

In addition to DOE/EM presentations, chairs from each SSAB shared highlights from their respective sites in a Chairs Round Robin presentation.

SSAB Chairs also considered three recommendations.

- A recommendation regarding EM milestone consistency and transparency was passed with changes.
- A second recommendation regarding improving EM's Science and Technology program passed with changes.
- A third recommendation regarding infrastructure improvement was deferred until after DOE can present information about current waste transport safety measures during the next meeting. This will clarify the scope of EM's recognition of the needs and will ensure there is support across the complex.

David Borak told Chairs that the next Chairs' Meeting will be held in Sun Valley, Idaho on October 28, 29 and 30. Travel day on October 27.

VII. Significance to ORSSAB:

This trip was important because it helped to share my concerns and those of the ORSSAB that the national EM program focus is changing to meet the challenging novel problems with both good science and improved management of the budget. We appear to be spending our tax dollars wisely.

VIII. Names & Telephone Numbers of Significant Contacts:

Contact info for other SSABs available on request

IX. Action Items:

ORSSAB members should be encouraged to participate in meetings that enhance their understanding of the DOE EM process and cleanup progress at other DOE sites.

Presentations and handouts from the event are available upon request.

X. Traveler's Signature & Date:

Signature: _____

Date: 06/05/2019

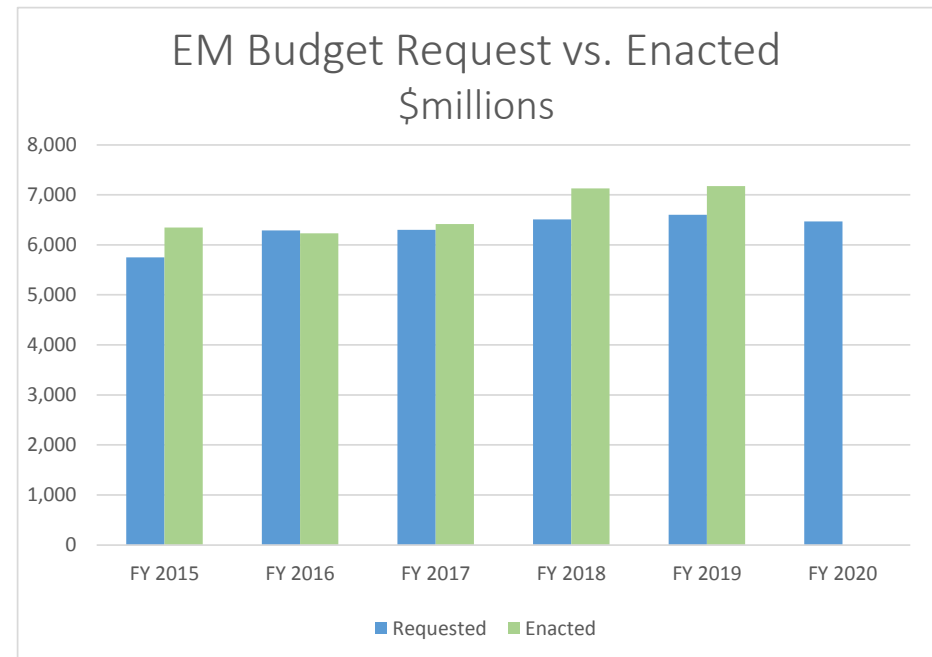
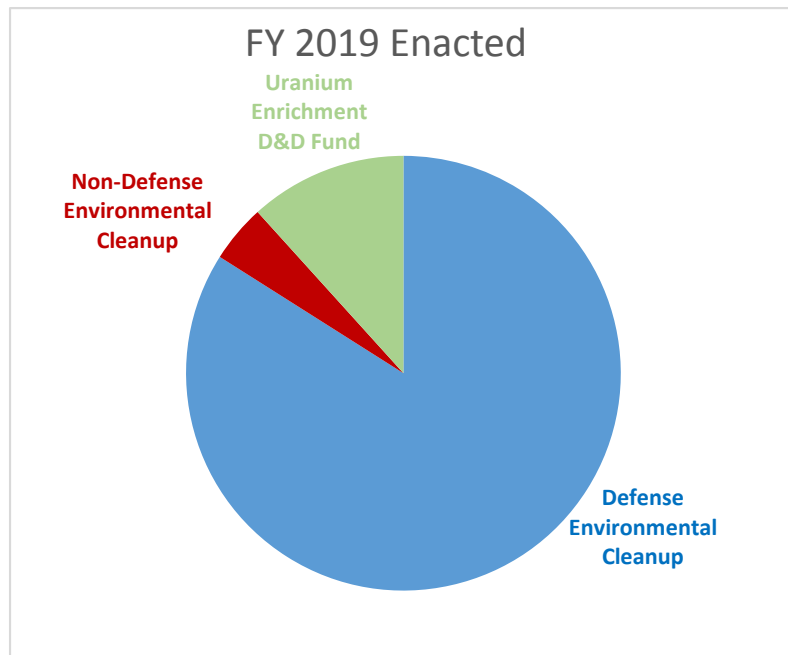
EM Site-Specific Advisory Board Chairs Meeting

Steve Trischman
Director, Office of Budget and Planning
Environmental Management

May 2019

Budget Trends

	FY 2018 Enacted	FY 2019 Cong Req.	FY 2019 HEWD	FY 2019 SEWD	FY 2019 Enacted	FY 2020 Cong Req.
Appropriation Summary						
Defense Environmental Cleanup	5,988	5,630	5,767	5,988	6,036	5,522
Non-Defense Environmental Cleanup	298	218	240	353	310	247
Uranium Enrichment D&D Fund	840	753	870	841	841	715
Subtotal	7,126	6,601	6,877	7,182	7,187	6,485
Offsets	0	0	-8	0	-12	-16
Grand Total, EM	7,126	6,601	6,869	7,182	7,175	6,469



FY18-20 Budget Requests

Site	FY 2018 Enacted	FY 2019 Cong Req.	FY 2019 HEWD	FY 2019 SEWD	FY 2019 Enacted	FY 2020 Cong. Req.
Brookhaven	2	2	2	25	20	0
Carlsbad	383	403	403	403	403	398
ETEC	9	8	15	8	11	18
Idaho	446	359	443	359	443	348
Los Alamos	220	192	198	230	220	195
Lawrence Livermore	101	2	2	52	27	130
Lawrence Berkeley	41	0	0	55	35	0
Moab	38	35	35	45	45	36
Nevada	60	60	60	60	60	61
Oak Ridge	640	409	501	646	646	429
Richland	947	747	952	937	954	718
River Protection	1,560	1,439	1,480	1,573	1,573	1,392
Paducah	273	270	291	275	274	277
Portsmouth	448	415	481	475	476	426
Savannah River	1,471	1,656	1,540	1,583	1,551	1,643
SPRU	5	15	15	15	15	15
Sandia	3	3	3	3	3	3
West Valley	78	64	78	78	78	78
Defense Closure Site Activities	5	5	5	5	5	5
Non-Defense Closure Site Activities	10	0	0	0	0	0
Program Direction	300	300	295	300	299	279
Mission Support Activities	15	13	13	13	13	13
Technology Development	35	25	32	29	25	0
Excess Facilities	0	150	0	0	0	0
Uranium Thorium Reimbursements	36	30	33	11	11	21
Offsets	0	0	-8	0	-12	-16
Total, EM	7,126	6,602	6,869	7,180	7,175	6,469

Environmental Management's Fiscal Year 2020 budget supports substantial progress:

- Maintains a safe and secure posture at all sites, while continuing with cleanup activities
 - Ramps up efforts to address radioactive tank waste at Savannah River through start-up of Salt Waste Processing Facility
 - Supports ventilation system completion and critical infrastructure at Waste Isolation Pilot Plant to enable increased waste shipments and emplacement
 - Keeps focus on Direct Feed Low Activity Waste approach to initiate Hanford tank waste treatment by December 2023
 - Advances construction on Outfall 200 Mercury Treatment Facility at Oak Ridge

The mission of the Office of Environmental Management is to complete the safe cleanup of the environmental legacy brought about by five decades of nuclear weapons development and government-sponsored nuclear energy research



Adopting Modern Completion-Centric Approach to Cleanup:

- Reflecting latest scientific knowledge about waste
- Incorporating lessons learned over three decades of cleanup and historic site completions
- Evaluating new cleanup technologies, treatment and disposal options
- Incorporating accurate and up-to-date schedule and cost data into decision making
- Analyzing opportunities, in collaboration with regulators and stakeholders, to complete cleanup safer and sooner

Reinvigorating the Cleanup Mission

- Recognizing time equals money
- Addressing challenges early on and head on
- Driving projects to completion through shift to end-state contracting

Maximizing Every Cleanup Dollar

- Lowering hotel costs and funneling those resources into actual cleanup
- Strengthening project management, oversight and accountability
- Prioritizing work based on real risks

Richland, WA: Workers began filling PUREX No.2 waste storage tunnel with engineered grout



Oak Ridge, TN: Removal of two high-risk excess contaminated facilities in Y-12's Biology Complex.



EM continues making measurable and meaningful progress towards cleanup completion

- Complete closure of the 90-acre D-Area Ash Project
- First transfer of land back to the local Portsmouth community
- Safe demolition of the vitrification facility at West Valley
- Demolition of Toxic Substances Control Act incinerator and 100 foot stack at Oak Ridge's East Tennessee Technology Park
- Continue processing of Canadian material, Foreign Research Reactor fuel, and High Flux Isotope Reactor fuel at H-Canyon
- Work underway on the second Salt Waste Disposal Unit at Savannah River – key to accelerating the tank waste mission
- Broke ground on the new ventilation system at Waste Isolation Pilot Plant, a facility that is the lynchpin to transuranic waste final disposition
- Commenced movement of radioactive sludge out of K-West Basin at Hanford on schedule
- On schedule to complete turnover from construction of vast majority (>90%) of the Waste Treatment and Immobilization Plant's Low Activity Waste facility at Hanford this year

EM will not only build on these recent successes in FY 2020 but is bringing a renewed sense of urgency to tackling cleanup challenges and driving down the third largest liability to the U.S. taxpayer.

EM is working collaboratively with cleanup partners toward a future that propels the mission forward and drives cleanup toward completion safer, sooner and at a responsible cost.



Hanford



Idaho



Waste Isolation Pilot Plant

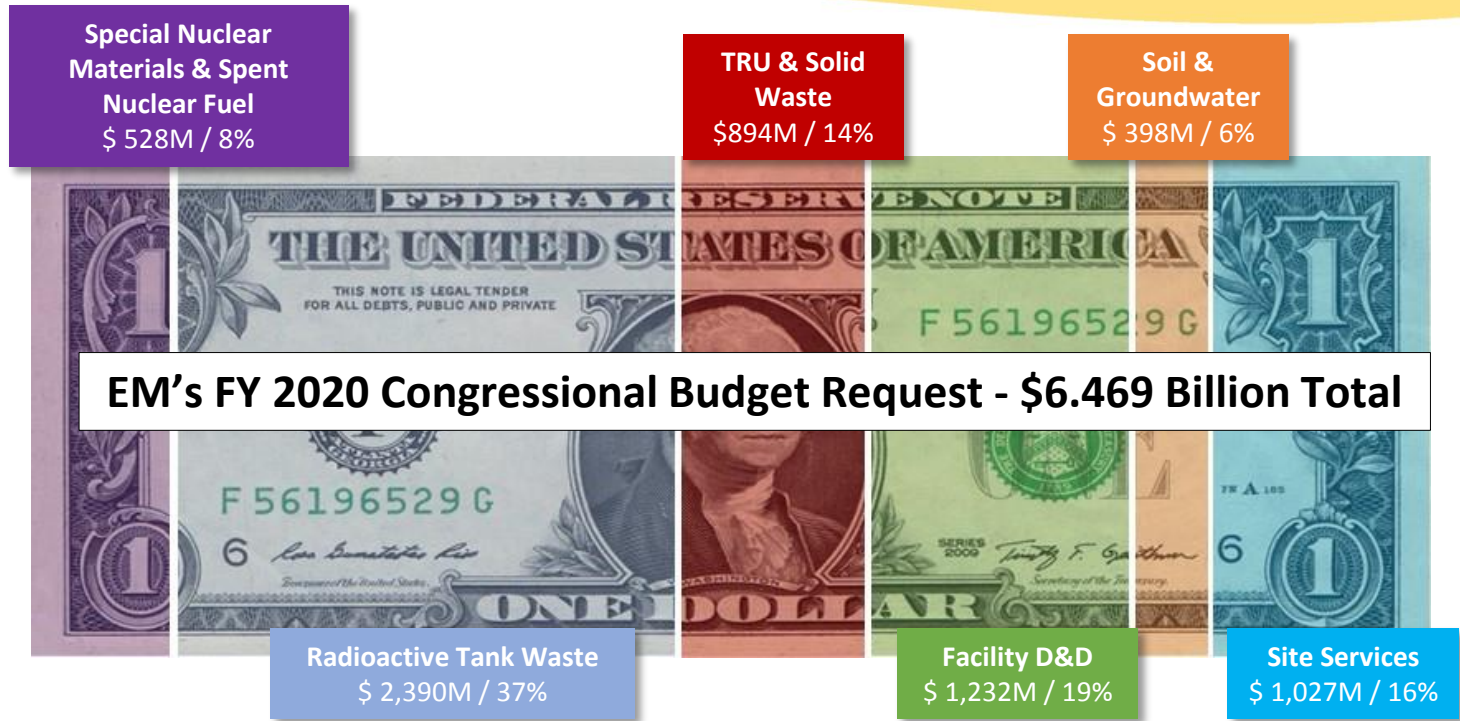


Savannah River



West Valley

EM has Six Primary Mission Areas



EM's FY 2020 Congressional Budget Request - \$6.469 Billion Total

EM Sites	✓	✓	✓	✓	✓	✓	✓	FY 20 (\$M)
Savannah River	✓	✓	✓	✓	✓	✓	✓	1,643
River Protection		✓					✓	1,392
Richland			✓	✓	✓	✓	✓	718
Idaho	✓	✓	✓	✓		✓	✓	348
Oak Ridge	✓		✓	✓	✓		✓	429
Portsmouth	✓			✓	✓		✓	426
Paducah	✓			✓	✓		✓	277
Carlsbad			✓				✓	398
Los Alamos			✓			✓	✓	195
West Valley			✓	✓	✓		✓	78
All Others			✓	✓	✓	✓	✓	565



South Carolina (\$1,643M)

Savannah River Site

- Complete removal of material-at-risk from 235-F which addresses remaining activities per Defense Nuclear Safety Board Implementation Plan to reduce residual Plutonium 238
- Liquid Waste/Salt Waste Processing
 - Supports Salt Waste Processing Facility (SWPF) start of radioactive operations, necessary to meet State commitments and advance completion of Cleanup Mission
 - Enables waste removal preparation activities required to support SWPF planned operations rate greater than current rate for salt waste processing, allowing tank closure to proceed at a rapid pace
 - Continue construction of Saltstone Disposal Units 7 and initiate construction of Saltstone Disposal Units 8/9 and design of Saltstone Disposal Units 10-12 Project to support SWPF planned rates
- Funding to initiate the Savannah River National Laboratory's Advanced Manufacturing Collaborative facility (AMC)



Salt Waste Processing Facility



Saltstone Disposal Unit 6/7 at the Savannah River Site



Washington (\$2,111)

Office of River Protection (\$1,392M)

- Initiate cold commissioning of the Waste Treatment and Immobilization Plant to support Low Activity Waste Facility hot commissioning and production operations by December 31, 2023
- Design and construct tank farm facility upgrades (i.e. 222-S Laboratory, 242-A Evaporator and the Effluent Treatment Facility) for staging waste in 2021 for Waste Treatment Plant operations
- Incorporate lessons learned from Savannah River cesium processing to facilitate fabrication, testing and delivery of the Tank-Side Cesium Removal System to pretreat waste for the LAW facility
- Perform tank integrity activities to ensure adequate double shell tank space is available for DFLAW and AX retrievals
- Complete retrieval of single shell tank AX-102 in support of Consent Decree milestone in 2021
- Advance a production scale offsite disposition path for tank waste utilizing the regulatory pathways created by Test Bed Initiative
- Hanford Tank Closure End State Contract scheduled for award in Q4 2019 incentivizes risk based cleanup that reduces financial liability



Tank Farms

Richland (\$718M)

- Reduce risk and facility costs by supporting construction activities for future relocation of Cesium & Strontium capsules to dry storage by the TPA due date of August 2025
- Shrink the extent of radiological and chemical contamination in groundwater at Hanford through treatment of 2.2 billion gallons
- Complete 324 Building structural mods, removal of the hot cell floor, and readiness review activities for start of soil removal for remediation of the 300-296 waste site below the building
- Hanford Central Plateau Cleanup End State Contract scheduled for award in Q4 2019 incentivizes risk based cleanup that reduces financial liability



K West Reactor Basin



Idaho (\$348M)

Idaho

- Complete exhumations at Accelerated Retrieval Project area in support of meeting regulatory milestone to retrieve, process and dispose of targeted buried waste by 2023
- Initiate hot operations of Integrated Waste Treatment Unit, pending successful demonstrations of the phase 2 simulant run 3 and phase 3 performance run, to begin processing liquid sodium-bearing waste leading to closure of the final 3 liquid waste tanks
- Complete processing of legacy transuranic waste such that waste is packaged and ready for certification and shipment
- Idaho Cleanup Project End State Contract scheduled for award in Q2 2020 incentivizes risk based cleanup that reduces financial liability



Integrated Waste Treatment Unit



Accelerated Retrieval Project Enclosure 9

Tennessee (\$429M)

Oak Ridge

- Complete demolition of 90% of East Tennessee Technology Park facilities and continue environmental remediation work
- Complete processing contact-handled and remote-handled legacy transuranic debris waste inventory
- Complete construction of transuranic sludge processing test area
- Complete preparation of Building 2026 for processing remaining U-233 material at Oak Ridge National Laboratory
- Complete second of four years of construction of the Mercury Treatment Facility
- Complete preliminary design and early site preparation of On-Site Comprehensive Environmental Response, Compensation, and Liability Act Disposal Facility
- Oak Ridge Reservation Cleanup Contract End State Contract scheduled for award in Q3 2020 incentivizes risk based cleanup that reduces financial liability



Demolition of East Tennessee Technology Park facilities



Outfall 200 Mercury Treatment Facility Rendering



Ohio (\$426M)

Portsmouth

- Continue pre-demolition activities of first process building (X-326)
- Continue deactivation of second process building (X-333)
- Complete construction of On-Site Waste Disposal Facility (OSWDF) Cell Liner 1 (15-U-408), providing initial capacity for X-326 Process Building demolition debris
- Complete design and initiate construction of OSWDF Cell Liners 2, 3, and 6 and remaining infrastructure (20-U-401), providing capacity for the X-333 demolition debris
- Operate Depleted Uranium Hexafluoride (DUF6) conversion facility with expected cumulative converted total of 35,000 metric tons (~14% of inventory)
- Portsmouth D&D End State Contract scheduled for award in Q1 2021 incentivizes risk based cleanup that reduces financial liability



Process Building X-326 at Portsmouth



Future vision of central plant after D&D is complete



Kentucky (\$277M)

Paducah

- Initiate characterization activities in C-333 Process Building (2nd of four gaseous diffusion plant buildings) to determine amounts and locations of uranium deposits for removal
- Complete characterization in C-331 Process Building to facilitate uranium deposit removal and subsequent declaration of Criticality Incredible
- Complete demolition of C-400 Cleaning Building, 116,140 ft² building used to clean uranium enrichment process equipment and located over source of offsite groundwater plume
- Conduct uranium deposit removal in C-331 Process Building to achieve Criticality Incredible and reduce surveillance and maintenance costs
- Reduce Limited Area footprint from ~750 to ~615 acres to reduce project costs associated with Safeguards and Security requirements
- Operate Depleted Uranium Hexafluoride (DUF6) conversion facility with expected cumulative converted total of 59,000 metric tons (~11% of initial inventory)



C-400 Complex at Paducah

New Mexico (\$596M)

Carlsbad (\$398M)

- Support up to 10 shipments per shippable week
- Construction progress on Safety Significant Confinement Ventilation System (15-D-411) and on Utility Shaft (formerly Exhaust Shaft) (15-D-412)
- Complete two infrastructure recapitalizations (public address system and electrical substations)

Los Alamos (\$195M)

- Commence operations in two (of three planned) TRU processing lines to treat waste for shipment to WIPP
- Reduce risk by completing ~50 shipments of TRU waste to WIPP
- Complete characterization of RDX (high explosives) plume beneath Cañon de Valle and continue activities to determine final remedy
- Prevent migration of Chromium plume offsite by implementing a hydraulic barrier
- Continue investigation and cleanup activities required to meet Consent Order milestones
- Continue groundwater and surface water sampling to remain compliant with the Consent Order and Individual Permit

Sandia (\$3M)

- Install up to 8 groundwater characterization wells at Burn Site and install 2 additional injection wells for groundwater treatability study at Technical Area-5



Transuranic waste shipments arrive at the Waste Isolation Pilot Plant in Carlsbad, New Mexico



Chromium project extraction wells at Los Alamos, New Mexico



New York (\$93M)

West Valley (\$78M)

- Conduct enhanced deactivation work to simplify future Main Plant Processing Building demolition, reducing the risk associated with open air demolition.
- Demolish 5 excess industrial facilities
- Manage and maintain site infrastructure
- West Valley End State Contract scheduled for award in Q1 2020 incentivizes risk based cleanup that reduces financial liability



Main Plant Process Building at West Valley

Separations Process Research Unit (SPRU) (\$15M)

- Initiate procurement actions to transport and treat 24 containers of Separations Process Research Unit transuranic waste

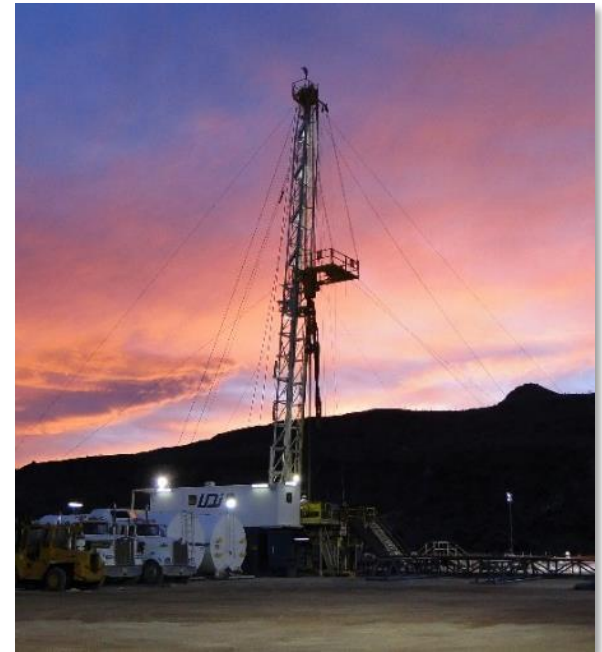


Storage of SPRU Waste

Nevada (\$61M)

Nevada National Security Site

- Complete closure of Corrective Action Unit (CAU) 97 Yucca Flat/Climax Mine
- Complete 3% for a total of 66% towards the closure of CAUs 101/102 Central and Western Pahute Mesa
- Initiate and complete 18% towards the installation of 4 post-closure monitoring network wells for CAUs 97 Yucca Flat/Climax Mine and 99 Rainier Mesa/Shoshone Mountain
- Conduct annual post-closure monitoring and maintenance of 197 closed-in-place contaminated soil and industrial-type sites
- Conduct annual post-closure sampling, monitoring and maintenance at 16 well locations associated with 76 closed-in-place contaminated groundwater sites
- Operate DOE owned waste disposal facility with the capability to receive between 1.2 to 1.5 million cubic feet of low-level and mixed low-level waste in support of cleanup activities across the DOE complex
- Maintain Nevada's Agreements in Principal and grants and provide funds for the Low-Level waste fee agreement
- Nevada Environmental Program Multiple Award Small Business End State Contract scheduled for award in Q2 2020 incentivizes risk based cleanup that reduces financial liability



Groundwater Well Drilling



Utah (\$36M)

Moab

- Excavation, transportation and disposal operations supporting 2 trains/week resulting in removal of 450,000 tons of tailings, 7.5% of the 6 million tons of tailings remaining
- Operate interim remedial action for contaminated groundwater including extracting 4 million gallons and diverting/injecting 6.5 million gallons of freshwater to protect the Colorado River from contamination
- Maintain/replace aging equipment to provide a safe working environment



Locomotive transports sealed containers of tailings from Moab to a disposal site



California (\$148M)

Energy Technology Engineering Center (\$18M)

- Complete the required groundwater corrective measures implementation
- Complete the groundwater Interim Measures for areas that exceed 1000 ppb for trichloroethylene (TCE)
- Complete demolition of the last 2 (of 18) remaining radiological buildings

Lawrence Livermore National Laboratory (\$130M)

- Complete decommissioning and demolition of B280
- Commence characterization of subsequent High Risk excess facilities based on Livermore Field Office priorities
- Supports the development of remedial solutions for contamination at Building 812, Building 850, and Building 865



Energy Technology Engineering Center



Lawrence Livermore National Laboratory

Background

➤ What drives the budget requirements?

- The Budget and Accounting Act requires the President to submit a budget
- Agencies have internal process that ultimately lead to the President formally transmitting budget proposals to Congress
- The Congress considers the recommendations and uses the information included in the budget as it drafts and passes laws that affect spending
- Neither branch of Government can unilaterally decide how budgets are distributed/executed, it is through the budget process the Government decides how much money to spend, what to spend it on, and how to raise the money it has decided to spend

➤ All Government agencies are required to follow the governing steps laid out in the Office of Management and Budget (OMB) Circular No. A-11 “Preparation, Submission, and Execution of the Budget”

- Provides an overview of the budget process
- Indicates what/when agencies can communicate externally

➤ **Defense Environmental Cleanup**

- Often referred to as 050 funds
- Funds legacy cleanup activities associated with Defense funded legacy waste
- Subject to Defense fund caps

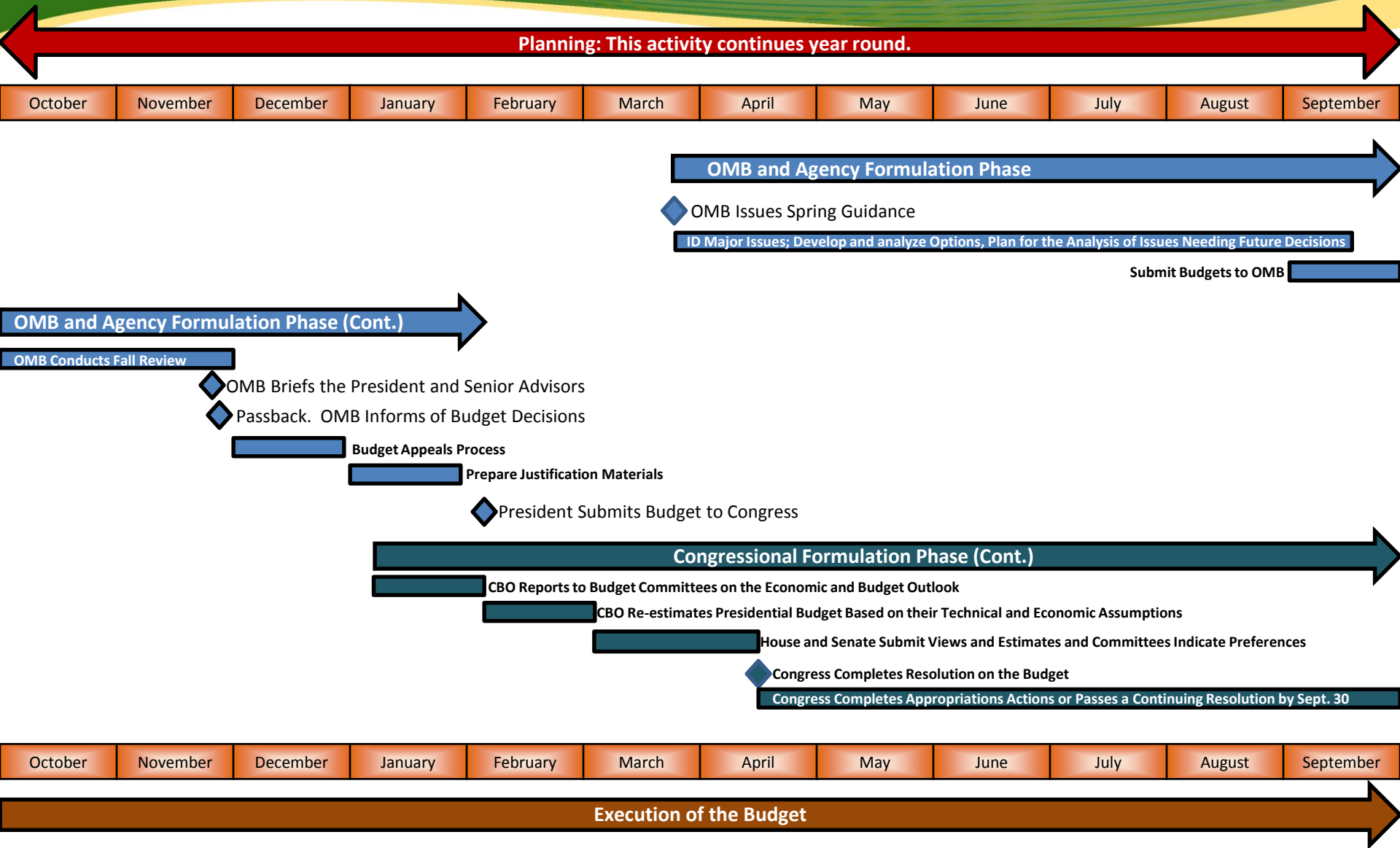
➤ **Non-Defense Environmental Cleanup**

- Often referred to as non-050 funds
- Funds legacy cleanup activities associated with non-defense funded legacy waste
- Subject to non-defense fund caps

➤ **Uranium Enrichment Decontamination and Decommissioning (UE D&D)**

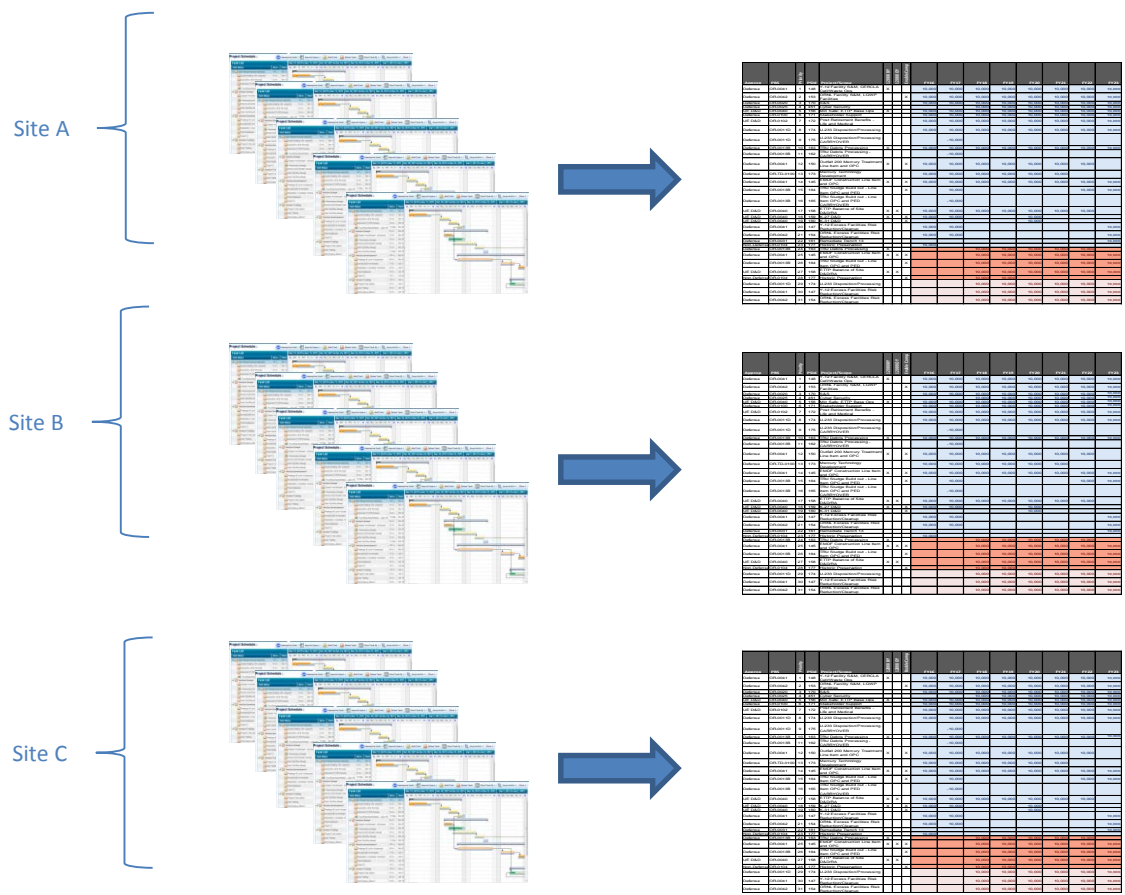
- Often referred to as non-050 funds
- Funds legacy cleanup activities under statutory requirements from the Energy Policy Act of 1992 for the sole purpose of uranium enrichment facility decontamination
- Subject to non-defense fund caps

Budget and Planning Timeline




*During OMB’s Agency Formulation Phase, Budget Allocations are Embargoed and **NOT** Releasable Outside of the Administration

Site Prioritization



Program Prioritization

Department of Energy
FY 2018 Congressional
Budget Request



Environmental Management

- FY 2019 Enacted is \$574M above our Request level and \$49M above our FY 2018 Enacted level which will allow continued progress in FY 2019

Oak Ridge (+\$238M) – Accelerate D&D of ETP, accelerate preparations of Bldg 2026 for processing remaining U233 inventory, accelerate progress on design and construction of TRU sludge test facilities, complete early site preparation five months early and accelerate ramp up for construction of Mercury Treatment Facility, accelerate preliminary design activities of the OSWDF, stabilize and reduce risks on high risk excess facilities at ORNL and Y12, perform life extension activities on critical ORNL waste treatment facilities, initiate cleanup of highest risk excess facilities at ORNL, and accelerate completion of commitments to preserve historical significance of K-25 gaseous diffusion plant.

Richland (+\$207M) – Resumes D&D of PFP to complete slab-on-grade, complete PUREX Tunnel #2 stabilization grouting, complete cleanout of 324 hot cells, equipment installation in B hot cell, initiate structural modifications and cutting of B hot cell floor, initiate planning for 100-K West Basin characterization and dewatering, initiate construction of 4 of 13 critical infrastructure upgrades for DFLAW, and resume support to repackaging of TRU waste

River Protection (+\$134M) – Supports HLW design, accelerate tank farm activities in support of DFLAW, initiate 242-A slurry line replacement, initiate AX-101 and 103 single shell tank equipment removal and procurements, and initiate DFLAW enabling design and procurements

Idaho (+\$84M) – Complete IWTU canister and cell decontamination upgrade to support radiological operations, complete AMWTP mission to treat CH-TRU, initiate planning for RCRA closure of the treatment facility, and perform D&D of priority INL excess facilities.

Portsmouth (+60M) – Achieve base program work scope, funding provided to compensate for loss of uranium barter which was discontinued for the entire fiscal year.

Congressional Support for the EM Program (continued)

- FY 2019 Enacted is \$574M above our Request level and \$49M above our FY 2018 Enacted level which will allow continued progress in FY 2019

LANL (+\$28M) – Accelerate TRU waste processing and shipments, Add Hazard Category II TRU waste processing capability and upgrade processing, execute additional chromium monitoring well installation and infrastructure modifications to control migration of the plume, and complete TA-21 site wide cleanup and relocate waste program support staff.

Lawrence Livermore (+\$25M) – Remove ancillary facilities to create a lay-down area for B280 D&D.

West Valley (+\$14M) – Begin enhanced deactivation work to simplify future Main Plant Processing Building demolition reducing the risk associated with open air demolition, and begin deactivation of the fuel receiving and storage area.

Moab (+\$10M) – Support 4 trains/week for annual rate of 900,000 tons of tailings showing accelerated progress.

Paducah (+\$4M) – Support NEPA activities for future oxide shipments, and a reduction in S&M costs: removal of inefficient and costly trailers and the office space is being reconfigured to accommodate relocated personnel.

ETEC (+\$3M) – Additional FY 2019 investment expedites building demolition and move towards site closure, and issue records of decision for soils, groundwater and buildings.

Brookhaven (+\$2M) – Complete demolition of HFBR stack, final site grading and final status survey, and development of documentation to closeout U.S. EPA CERCLA Record of Decision.

Total Reductions (-\$276M) – Savannah River (-\$105M), Program Direction (-\$1.5M), Excess Facilities (-\$150M), and Uranium Thorium (-\$19M)

FY 2019 Enacted Structure - \$7,175,129 net

(dollars in thousands)

	\$6,024,000 Defense Environmental Cleanup (050)	\$310,000 Non-Defense Environmental Cleanup (non-050)	\$841,129 Uranium Enrichment Decontamination and Decommissioning (UE D&D) (non-050)
1	Closure Sites Administration	1. Fast Flux Test Reactor Facility	1. Oak Ridge
2	Richland: Central Plateau Remediation	2. Gaseous Diffusion Plants	2. Paducah Nuclear Facility D&D
3	Richland: River Corridor and Other Cleanup Operations	3. Small Sites	3. Portsmouth Nuclear Facility D&D
4	Richland: Richland Community and Regulatory Support	4. West Valley Demonstration Project	4. Portsmouth: 15-U-408 On-Site Waste Disposal Facility
5	Richland: 18-D-404 WESF Modifications and Capsule Storage		5. Pension and Community and Regulatory Support
6	Office of River Protection: Waste Treatment and Immobilization Plant Commissioning		6. Title X Uranium/Thorium Reimbursement Program
7	Office of River Protection: Rad Liquid Tank Waste Stabilization and Disposition		
8	Office of River Protection: 15-D-409 Low Activity Waste Pretreatment System		
9	Office of River Protection: 18-D-16 Waste Treatment and Immobilization Plant -LBL/Direct Feed LAW		
10	Office of River Protection: 01-D-16 D High-Level Waste Facility		
11	Office of River Protection: 01-D-16E Pretreatment Facility		
12	Idaho National Laboratory: Idaho Cleanup and Waste Disposition		
13	Idaho National Laboratory: Idaho Community and Regulatory Support		
14	Idaho National Laboratory: ID Excess Facilities D&D		
15	NNSA Sites: Lawrence Livermore National Laboratory		
16	NNSA Sites: LLNL Excess Facilities D&D		
17	NNSA Sites: Separations Process Research Unit		
18	NNSA Sites: Nevada		
19	NNSA Sites: Sandia National Laboratories		
20	NNSA Sites: Los Alamos National Laboratory		
21	Oak Ridge: OR Nuclear Facility D&D		
22	Oak Ridge: U233 Disposition Program		
23	Oak Ridge: OR Cleanup and Disposition		
24	Oak Ridge: 17-D-401 On-site Waste Disposal Facility		
25	Oak Ridge: 14-D-403 Outfall 200 Mercury Treatment Facility		
26	Oak Ridge: OR Reservation Community and Regulatory Support		
27	Oak Ridge: OR Technology Development and Deployment		
28	Savannah River Site: Savannah River Site Risk Management Operations		
29	Savannah River Site: SR Community and Regulatory Support		
30	Savannah River Site: Radioactive Liquid Tank Waste Stabilization and Disposition		
31	Savannah River Site: 19-D-701 SR Security System Replacement		
32	Savannah River Site: 18-D-402 Saltstone Disposal Unit #8/9		
33	Savannah River Site: 18-D-402 Emergency Operations Center Replacement		
34	Savannah River Site: 17-D-402 Saltstone Disposal Unit #7		
35	Savannah River Site: 05-D-405 Salt Waste Processing Facility		
36	Waste Isolation Pilot Plant: Waste Isolation Pilot Plant		
37	Waste Isolation Pilot Plant: 15-D-411 Safety Significant Confinement Ventilation System		
38	Waste Isolation Pilot Plant: 15-D-412 Exhaust Shaft		
39	Program Direction		
40	Program Support		
41	Safeguards and Security		
42	Technology Development		

Field Operations Update

**EM SSAB Chairs Meeting
Augusta, Georgia
May 2019**

**Jeff Griffin, Ph.D.
Associate Principal Deputy Assistant Secretary,
Field Operations**

ENSURING THAT EM PRIORITIES ARE REFLECTED IN SITE PRIORITIES

Focus on the Future

- End State Contracting
- Consistency in Contract Accountability
 - PEMP guidance
 - Fee Advisory Board
- Safety, Security and QA changes
- Technology Development
- Opportunities for Accelerating Work – Art of the Possible

2019 Expected Accomplishments

- EM effort to renew/create an industry **culture focused on completion**
- **Two-Step Process** provides EM with the flexibility to partner with industry and stakeholders to openly negotiate the right End States and regulatory framework to reach completion
- Developed with consideration of industry feedback

Potential Future End State Contracts*

Central Plateau Cleanup Contract

Hanford Tank Closure Contract

Nevada Environmental Program Services

Oak Ridge Reservation Cleanup

Idaho Cleanup Project

Portsmouth D&D

West Valley Decommissioning

*Subject to change

Performance Evaluation Measurement Plans (PEMPS)

Ongoing HQ Reviews

- Internal feedback for EM to ensure that efforts are:
 - Focused on Project completion,
 - Aligned with EM priorities and principles of End-State Contracting, or
 - Managed appropriately while we transition to End-State Contracts
- Updated to account for incremental scope increase
- Review of specific subject elements
- Includes effectiveness of Contractor Assurance System as part of the evaluation criteria

DOE HQ Fee Advisory Board

- Note: Fee Determining Official maintains final authority on fee
- Fee Advisory Board provides consistency across EM by:
 - Recommending proper incentives to deliver superior performance.
 - Making recommendations to improve future fee determination criteria and other contract changes to drive performance
 - Ensuring recommendations are based on sound data and implemented in a fair and robust process.
- Institutionalizes clear EM corporate expectations

Initiatives to improve effectiveness and efficiency in safety and Quality Assurance Areas

- Streamline upcoming contracts to remove unnecessary safety, security and QA requirements while focusing on safety – not the “how to”
 - Graded approach and innovative implementation
 - Intended to expedite closure activities
- Partnering with contractors for Contractor Assurance System reviews
 - Promotes contractor-led improvements
 - Focus Field Offices on performance and results
 - First pilot at SRS, several other sites to follow
- Improve sharing of lessons learned and best practices in safety and QA across the Enterprise

EM Technology Development Program

- Establish a Program Management process
 - Selection
 - Prioritization
 - Portfolio management
- Align TD efforts with EM priorities and schedules
- Include all TD funded activities - site and HQ funded
- As appropriate, incorporate recommendations from the National Academies Independent Assessment

FY19 \$25M appropriations (\$16M Congressionally directed)

EM is conducting an “Art of the Possible” analysis to identify:

- **Opportunities for accelerating site closure,**
- **Proposed sequencing for cleanup activities, and**
- **Potential means for reducing environmental liability**
- **remaining in compliance with all applicable environmental and safety requirements and reducing risk to the public and environment.**

**Some assumptions used in these analyses may need to be verified
Significant modeling efforts may be needed to validate results.**

Some Accomplishments Planned for 2019

Moab - Increasing shipments of contaminated soil to 4 trains/week



SPRU - Demolition and removal of all buildings, foundations, debris and equipment has now been completed.



WIPP - Work on the new underground air ventilation system



Los Alamos - Installing monitoring well for the Chromium Project



Savannah River - Tank Closure Cesium Removal treatment unit operation



Richland - Complete demolition of the Plutonium Finishing Plant



Oak Ridge - Demolish Building K-1037 scheduled for completion later this year

Some Accomplishments Planned for 2019



Idaho –
Conduct full-
scale retrieval
demo of
calcine waste
from the
storage bins



Savannah River Site -
Salt Waste Processing Facility Next
Generation Solvent Cold Feeds Area



Office of River Protection –
Complete construction of
the Effluent Management
System



Oak Ridge Site Specific Advisory Board

TRIP REPORT

- I. **Name of Traveler:** Sara McManamy-Johnson
- II. **Date(s) of Travel:** May 6-9, 2019
- III. **Location of Meeting:** Augusta, GA
- IV. **Name of Meeting:** Spring 2019 SSAB Chairs Meeting
- V. **Purpose of Travel:** Attend meetings; tour Savannah River Site
- VI. **Discussion of Meeting:**

May 7, Chairs' meeting participants toured the U.S. Department of Energy's (DOE) Savannah River Site (SRS) and the Savannah River National Laboratory (SRNL). The tour included site overview presentations from **Savannah River Nuclear Solutions President and CEO Stuart MacVean** and **Savannah River National Laboratory Associate Laboratory Director, Environmental Stewardship, Connie Herman**.

Tour highlights included a driving tour viewing the following site areas:

- Low-level waste (LLW) disposal facilities;
- High-level waste (HLW) management tanks;
- H-Canyon;
- The Salt Waste Processing Facility;
- The Saltstone Facility.

Additionally, facility hosts led participants on a walking tour of the Defense Waste Processing Facility (DWPF), where waste vitrification is performed.

Meetings on May 8 and 9 featured presentations and Q&A sessions with DOE leadership, including: **Mark Gilberston, DOE Principal Deputy Assistant Secretary; Steve Trischman, DOE Director of Budget and Program Planning; and Jeff Griffin, Associate Principal Deputy Assistant Secretary for Field Operations**.

Highlights from **Mr. Gilbertson** included:

- Progress across the EM Complex.
- EM safety performance.
- Recent EM accomplishments.

- SRS coal ash work completed ahead of schedule and under budget.
- Facility D&D accomplishments.
- Oak Ridge cleanup progress.
- Hanford progress, including sludge removal and second tunnel filled.
- DOE move toward modern, completion-centric approach to cleanup.
- DOE efforts to increase transparency, especially as it relates to program milestones.
- DOE efforts to increase efficiency, especially through a shift toward end-state contracting.

Highlights from **Mr. Trischman** included:

- An overview of the FY 2020 Congressional Budget Request for EM, including funding breakdown to the site level.
- Total funding, \$6.469 billion is a decrease from FY 2019.
- Environmental Management (EM) is adopting a modern, completion-centric approach to cleanup.
- Highlights of each site's planned projects for FY 2020.
- \$429 million requested for Oak Ridge for FY 2020.
- Oak Ridge projects planned for FY 2020 include:
 - Complete demolition of 90% of East Tennessee Technology Park (ETTP) facilities.
 - Complete processing contact-handled and remote-handled legacy transuranic debris waste inventory.
 - Complete construction of transuranic sludge processing test area.
 - Complete preparation of Building 2026 for processing remaining U-233 material at Oak Ridge National Laboratory (ORNL).
 - Complete second of four years of construction of the Mercury Treatment Facility (MTF).
 - Complete preliminary design and early site preparation of On-Site Comprehensive Environmental Response, Compensation, and Liability Act Disposal Facility.
 - Oak Ridge Reservation (ORR) Cleanup Contract End State Contract scheduled for award in FY 2020's third quarter incentivizes risk-based cleanup that reduces financial liability.

Highlights from **Mr. Griffin** included:

- Implementation of EM priorities in the field
 - End-state contracting
 - EM effort to renew/create an industry culture focused on completion
 - Two-step process provides EM with the flexibility to partner with industry and stakeholders to openly negotiate the right End States and regulatory framework to reach completion
 - Consistency in contract accountability
 - Performance Evaluation Measurement Plans (PEMPS) guidance
 - Fee Advisory Board

- Safety, security and quality assurance (QA) changes
 - Streamline upcoming contracts to remove unnecessary safety, security and QA requirements while focusing on safety, not "how-to"
 - Partnering with contractors for Contractor Assurance System reviews
 - Improve sharing of lessons learned and best practices in safety and QA across the Enterprise
- Technology development (TD)
 - Establish a Program Management process (Selection, Prioritization, and Portfolio Management)
 - Align TD efforts with EM priorities and schedules
 - Include all TD funded activities (site- and HQ-funded)
 - Incorporate recommendations from the National Academies Independent Assessment, as appropriate
- Opportunities for accelerating work
 - EM is conducting analyses to identify opportunities for site closure, proposed cleanup activity sequencing, means to reduce environmental liability
- EM goals for 2019
 - Oak Ridge - Demolish Building K-1037 later this year
 - Moab - Increase shipments of contaminated soil to 4 trains per week
 - WIPP - Work on the new underground air ventilation system
 - Los Alamos - Install and monitor well for the Chromium Project
 - Savannah River - Tank Closure Cesium Removal treatment unit operation
 - Richland - Complete demolition of the Plutonium Finishing Plant
 - Idaho - Conduct full-scale retrieval demo of calcine waste from the storage bins

In addition to DOE/EM presentations, chairs from each SSAB shared highlights from their respective sites in a Chairs Round Robin presentation.

SSAB Chairs also considered three recommendations.

- A recommendation regarding EM milestone consistency and transparency was passed with changes.
- A second recommendation regarding improving EM's Science and Technology program passed with changes.
- A third recommendation regarding infrastructure improvement was deferred until after DOE can present information about current waste transport safety measures during the next meeting.

David Borak told Chairs that the next Chairs' Meeting will be held in Sun Valley, Idaho.

VII. Significance to ORSSAB:

This trip was important because it helped enhance my understanding of the cleanup efforts of DOE EM over the whole complex and its focus on near- and long-term cleanup efforts, partnering and contracting strategies and funding.

VIII. Names & Telephone Numbers of Significant Contacts:

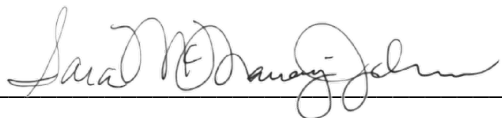
Contact info for other SSABs available on request

IX. Action Items:

ORSSAB members should be encouraged to participate in meetings that enhance their understanding of the DOE EM process and cleanup progress at other DOE sites.

Presentations and handouts from the event are available upon request.

X. Traveler's Signature & Date:

Signature:  Date: 5/21/2019



Oak Ridge Site Specific Advisory Board

TRIP REPORT

- I. Name of Traveler:** Leon F. Shields
- II. Date(s) of Travel:** 3/13/2019 – 3/16/2019
- III. Location of Meeting:** Washington D.C.
- IV. Name of Meeting:** National Environmental Justice Conference
- V. Purpose of Travel:** Attendance is critical in understanding the vital issues related to environmental justice.

VI. Discussion of Meeting:

During the attendance of the 2019 National Environmental Justice Conference presentations and discussions involved a wide range of topics. A few highlights include: Common goals for environment justice programs, Environment justice outreach programs, Environmental climates on campuses, Finding and maintaining Mentors for youth environment programs, and Health Impact Assessments.

VII. Significance to ORSSAB:

The participation that ORSSAB members take in the role of environmental management has direct impacts on the community surrounding the Oak Ridge Reservation. Participation in these types of conferences promote networking, education, and involvement with other partnering agencies to support the actions and decisions that members make in ORSSAB stewardship. Presentations at the National Environmental Conference provides a variety of aspects in issues faced in decommissioning facilities with unique factors and placing those managed areas back to a safe, eco-friendly, and economic environment.

VIII. Topics of Discussion:

The 2019 Environment Justice Conference consisted of participants of organizations facing issues relating to various environmental impacts. The conference highlighted the technics and programs currently implemented to the environmentally friendly transition areas in communities across the country.

Discussions briefed attendees on the C.A.M.E.O.: An Environmental Justice Outreach Program Created for Minority Students by Minority Students.

Explanations of 4 Unique Paths, 1 Common Career Goal of Justice for the Environment: Paths of Students Preserve the Environment and Make a Communal Difference.

Presentation on the Environmental Climate Change on Campus: The Demand of Environmental Justice Education at High Research Universities.

Education regarding finding and maintain an effective mentor-mentee relationship. Educating, motivating. And innovating the next generation of Environmental Justice Leaders.

Revisited Hurricane Harvey Impacts. Ongoing efforts to continue cleanup.

Discussions on Health Impact Assessments for Four Environmental Justice Communities in New Orleans, Louisiana & Mobile, Alabama & Pensacola, Florida & Houston, Texas.

Discussions and Education on Hydrolyzed Chitin Extracted from Seafood Shell Waste as a Biocompatible Sorbent in Reversible Carbon Dioxide Sequestration.

Revisited impact of Heavy Metals in Sediments Collected from Savannah River Estuary in Savannah, Georgia.

Presentation on Engaging Tribal Communities in Forest Restoration through Timber Program Development.

Discussions on Area Wide Planning for Brownfields and long term Management.

IX. Action Items:

The conference lecturers presented various handouts regarding programs. Please see attached, a packet of information.

X. Traveler's Signature & Date:

Signature: 

Date: APRIL 8, 2019

EM Project Update

ETTP	April	May
Zone 1 Interim ROD		The Duct Island Ecological Remedial Action PCCR D1 was submitted to the regulators for approval.
Zone 2	The K-29 Slab Removal project is complete. Concrete removal is complete and 99 percent of waste generated to date has been disposed. Backfill operations are 60 percent complete.	The waste hauling and backfill operations on the K-29 Slab Removal project are complete. Final topsoil and seeding operations are very close to completion.
		The Technetium-99 project is 59 percent complete. Approximately 570 cubic yards of contaminated soil were disposed on site at EMWMF.
Remaining Facilities	Removal of exterior transite is 79 percent complete on the K-1037 project. Of the total 7-acre building footprint, building demolition is 93 percent complete, and waste hauling is 52 percent complete.	Demolition of the K-1037 facility is complete and waste disposal is 85 percent complete.
	Centrifuge Building K-1200 characterization is complete and asbestos-containing material (ACM) abatement is 24 percent complete.	Demolition of the K-1034-A facility is 95 percent complete and waste disposal is 53 percent complete.
	Centrifuge Building K-1210 characterization/sampling is 63 percent complete, ACM abatement is complete, and hazardous/universal waste removal is 95 percent complete.	Centrifuge Building K-1210 characterization/sampling is 67 percent complete, and miscellaneous classified equipment removal is 95 percent complete.
	Centrifuge Building K-1220 characterization/sampling is 63 percent complete. Hazardous/universal waste removal is 97 percent complete. Miscellaneous classified equipment removal is 89 percent complete.	Centrifuge Building K-1220 ACM abatement and hazardous/universal waste removal are complete. Miscellaneous classified equipment removal is 95 percent complete. Centrifuge machine disassembly and shipping is 58 percent complete.
	The K-1423 building characterization/sampling activities are 26 percent complete, universal waste removal is 97 percent complete, and mobilization for deactivation is complete. The work packages for K-1203-10 are 90 percent complete.	The K-1423 building characterization/sampling activities are complete, ACM abatement is 38 percent complete, and the universal waste removal is 97 percent complete. The work packages for K-1203-10 are 98 percent complete.
	The Waste Handling Plan for Poplar Creek High Risk Facilities & Tielines Addendum V was approved by the regulators.	Overall, Poplar Creek deactivation is 99 percent complete and demolition is 74 percent complete. Building K-131 was demolished and crews continue processing and hauling debris. Demolition of K-631 will follow.
ETTP Historic Preservation	Continued framing interior walls and partitions; hanging, insulating, and finishing dry wall; installing electrical service equipment; and running conduit, pulling and terminating wire, and installing fixtures. Spray painted ceiling and initiated painting walls. Excavated soil and backfilled with flowable fill to establish stable base for entrance canopy. Built forms and tyed rebar for canopy columns and emergency exit stairs. Poured footings for canopy column. Initiated excavation of soil for retaining wall. Continued fabrication of exhibit structures, conservation of artifacts, preparation of exhibit and graphic mockups, and preparation of audiovisual productions.	

EM Project Update

ORNL	April	May
Bethel Valley ROD	The Waste Handling Plan for the NW Quad/NE Laydown Appendix D (Sampling & Analysis of 3500 Area Slabs) was approved by the regulators.	
	The Remedial Action Work Plan Attachment Q for the 3500 Area (EU 5) was approved by the regulators.	
Molten Salt Reactor Facility (MSRE)	Completed the shipment of all the shipping casks that were acquired to contain the MSRE salts for shipment and disposition. The unused casks were shipped to Roane Metals for recycling.	Completed the relocation of the containment ventilation system stack air sampling equipment at ground level. This was completed to facilitate the air sample measurements that were taken by UT-Battelle staff.
		Pump-down activities for the fuel salt tanks have been successfully completed, allowing the facility to exit from limiting conditions for operation associated with an exceedance of tank pressure requirements of the Technical Safety Requirements.
		The MSRE 2018 PCCR was submitted to the regulators for review/approval.
U-233 Disposition	The Building 2026 Processing Preparation project received approval of the consolidated Critical Decision 2 (Approve Performance Baseline) and Critical Decision 3 (Approve Start of Construction/Execution). Project will prepare Building 2026 for processing, solidification, and disposal of the remaining U-233 stored in Building 3019.	Demolition is progressing on the west end of Building 3017. The discovery of additional asbestos abatement delayed separation of the west end of the facility from the east.
	A new 200-ton chiller was installed, replacing an existing deteriorated, non-operational system along with removal and replacement of the deteriorated chilled water piping at Building 2026.	
ORNL Facilities D&D	Activated metal sampling in the reactor pool has been completed at the 3010 Bulk Shielding Reactor. Laboratory analysis of the samples is underway to determine the appropriate disposition path.	Completed physical disconnection of all utilities associated with the Building 3010 Complex. Work focus has shifted to hazardous waste removal and asbestos abatement.
	The FY 2018 PCCR for Waste Management Surveillance and Maintenance was submitted to and approved by the regulators.	Universal waste removal is complete inside Building 3080. Marking and sampling for characterization of the building for demolition is in progress.
		The QAPP for the Tritium Target was approved by the regulators.
Y-12	April	May
Outfall 200 Mercury Treatment Facility	The DOE construction contractor continues to submit documents and RFIs for review. OREM is targeting June 17 to complete necessary reviews and forecasts the contractor will mobilize that day.	The DOE construction contractor continues to submit documents and RFIs for review. OREM is still targeting June 17 to complete necessary reviews and forecasts the contractor will mobilize that day.

EM Project Update

Y-12	April	May
Y-12 Facilities D&D	Tapping and draining activities to remove mercury from the East COLEX equipment at Alpha 4 have begun.	The RAWP Addendum for Building 9201-5 Dust Collector and the Addendum for Building 9822 External Equipment Removal was submitted to the regulators for review.
	Mobilization, temporary power from the Y-12 electrical grid, and utility isolations are more than 99 percent complete at the Biology Complex. Hazard abatement is 20 percent complete. Universal waste removal activities are also underway.	Completed installation of permanent power from the electrical grid to support asbestos abatement activities at the Biology Complex. The subcontractor for asbestos abatement work and the subcontractor for construction elevator installation are both mobilized.
	The Biology Complex was originally expected to be within a single exposure unit (EU). Further planning identified an additional area needed for construction of the new facility. A proposal to redefine the affected EU to expand the cleanup footprint was presented to the regulators.	
Off-Site Cleanup/Waste Management	April	May
Transuranic Waste Processing Center (TWPC)	Staff from the Carlsbad Field Office team visited to discuss Waste Isolation Pilot Plan (WIPP) updates, TWPC waste processing schedules, and ORNL Waste Program progress.	
EMDF	A presentation was held for senior EPA and TDEC personnel on the results from the site-specific characterization of the Central Bear Creek Valley site and on calculated projected post-construction groundwater levels for the proposed new CERCLA waste disposal facility. DOE requested a 3-month extension to the ROD.	Phase 3 Characterization was completed. The 3-month extension for the ROD milestone was approved by the regulators.
WRRP	The D2 Phase 1 Melton Valley/Bethel Valley Exit Pathway Remedial Investigation Work Plan was approved by the regulators.	Reconnaissance of 15 spring/surface water locations in the Raccoon Creek/Ish Creek area near the Clinch River was completed under the approved Phase 1 Melton Valley/Bethel Valley Exit Pathway Remedial Investigation Work Plan.
	A two-day data quality objectives session for the Bethel Valley Final Groundwater Record of Decision Remedial Investigation Work Plan was held with 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

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

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



FY 2019 Incoming Correspondence

#	Date	To	From	Description	DOEIC, Notified board officers of receipt
176	5/6/2019	Japp, DOE	Young, TDEC	Response to April 25, 2019, letter from DOE - Extension for Submission of the Phased Construction Completion Report for Demolition of the Central Neutralization Facility at ETPP (DOE/OR/01-2782&D2)	DOEIC, Notified board officers of receipt
177	5/6/2019	Japp, DOE	Young, TDEC	TDEC Comments Regarding Addendum to the Spillway Gates to the Removal Action Report for Corrective Action at White Oak Dam at ORNL	DOEIC, Notified board officers of receipt
178	5/6/2019	Japp, DOE	Jones, EPA	TDEC Comments Phased Construction Completion Report for the Demolition of the Column Exchange West at Y-12	DOEIC, Notified board officers of receipt
179	5/7/2019	Japp, DOE	Jones, EPA	EPA Response to Comments Related to the 2019 FFA Proposed Appendix J	DOEIC, Notified board officers of receipt
180	5/7/2019	Japp, DOE	Jones, EPA	EPA Approval for extensions for the submittal of the ETPP Main Plant Area Groundwater Feasibility Study and Proposed Plan	DOEIC, Notified board officers of receipt
181	5/8/2019	Japp, DOE	Young, TDEC	FFA Milestone Extension Request for ETPP Main Plant Area Groundwater Feasibility Study and Proposed Plan	DOEIC, Notified board officers of receipt



FY 2019 Incoming Correspondence

#	Date	To	From	Description	DOEIC, Notified board officers of receipt
182	5/8/2019	Japp, DOE	Young, TDEC	Extension for Submission of the Amendment to the ROD for Interim Actions in Zone 1, K-770 Area Soil Cover, ETPP	DOEIC, Notified board officers of receipt
183	5/9/2019	Jones, EPA; Young, TDEC	McMillan & Japp, DOE	Submittal of the Phased Construction Completion Report for FY 2018 for the MSRE Remediation of Secondary LLW at ORNL	DOEIC, Notified board officers of receipt
184	5/16/2019	Japp, DOE	Jones, EPA	EPA to DOE RE Colex Mercury Release and Fish Kill	DOEIC, Notified board officers of receipt
185	5/14/2019	Daffron, McMillan, Henry & Moore, DOE	Awasthi & Brahmbatt, TDEC	Submittal of the Semi-Annual Progress Report, Site Treatment Plan for Mixed Waste on the USDOE ORR	DOEIC, Notified board officers of receipt
186	5/22/2019	Jones, EPA; Young, TDEC	Daffron & Japp, DOE	Transmittal of the K-31/K-33 Area Groundwater Remedial Site Evaluation Report for the East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2765&D2)	DOEIC, Notified board officers of receipt



FY 2019 Incoming Correspondence

#	Date	To	From	Description	DOEIC, Notified board officers of receipt
187	5/23/2019	Jones, EPA; Young, TDEC	Daffron & Japp, DOE	Transmittal of the Fiscal Year 2018 Phased Construction Completion Report for the Low Risk/Low Complexity and Predominantly Uncontaminated Facilities of the Remaining Facilities Demolition Project at the East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2803&D2)	DOEIC, Notified board officers of receipt
188	4/26/2019	Japp, DOE	Richards, EPA	EPA Approval for the FY 2018 Phased Construction Completion Report for Surveillance and Maintenance Activities, ORNL Oak Ridge, TN, Jan, 2018 (DOE/OR/01-2814&D1)	DOEIC, Notified board officers of receipt
189	5/21/2019	Japp, DOE	Richards, EPA	Phased Construction Completion Report for FY18 for the Molten Salt Reactor Experiment, Remediation of Secondary Low-Level Waste at ORNL (DOE/OR/01-2815&D1)	DOEIC, Notified board officers of receipt



FY 2019 Incoming Correspondence

#	Date	To	From	Description	DOEIC, Notified board officers of receipt
190	5/30/2019	Young, TDEC	Henry & Japp, DOE	Response to the State of Tennessee Department of Environment and Conservation Letter RE: Several Critical Composite Analysis Issues Related to the CERCLA Process for the Proposed Environmental Management Disposal Facility	DOEIC, Notified board officers of receipt
191	5/30/2019	Japp, DOE	Young, TDEC	DOE OREM FY 2020 Budget Request	DOEIC, Notified board officers of receipt
192	5/31/2019	Jones, EPA; Young, TDEC	McMillan & Japp, DOE	Transmittal of the Sampling and Analysis Plan for Characterization of the Tritium Target Preparation Facility Building 7025 Located at Oak Ridge National Laboratory, Oak Ridge, Tennessee (DOE/OR/01-2801&D2)	DOEIC, Notified board officers of receipt
193	6/3/2019	Japp, DOE	Froede, EPA	EPA comments on D1 EMWMF FY2019 PCCR	DOEIC, Notified board officers of receipt

Travel Opportunities

Meeting/Event	Dates	Location	Cost	Website	Deadline to Submit Requests
FY 2019					
DOE National Cleanup Workshop Requests: Shields, Lohmann, Burroughs	Sept. 10 -12, 2019	Alexandria, VA	\$425	www.cleanupworkshop.com	3/17/19
2019 Spring Chairs Meeting Requests: Lohmann, Wilson, Tapp	May 7-9, 2019	Aiken, SC	NA		April 2
RadWaste Summit Requests: Shields	Sept. 3-5, 2019	Henderson, Nevada	\$625	http://www.radwastesummit.com/	April 10
ORSSAB Annual Meeting All members invited to attend	Aug. 24, 2019	Townsend, TN	NA		7/8/19
Perma-Fix Nuclear Waste Management Forum Requests: none	TBD/Likely November			https://ir.perma-fix.com/upcoming-events	TBD/likely July
FY 2020					
2019 Fall Chairs Meeting	Oct. 28-30, 2019	Sun Valley, Idaho	NA		TBD/likely August
EPA National Brownfields Conference	December 11-13, 2019	Los Angeles, CA	\$200	https://brownfields2019.org/	TBD/likely October
Waste Management Symposium Requests: none	March 8-12, 2020	Phoenix	likely \$1200	www.wmsym.org	TBD/Likely August
National Environmental Justice Conference & Training Requests: none	April 22-25, 2020	Washington, D.C.	NA	http://thenejc.org	TBD/Likely November
EPA Community Involvement Training Requests: none	TBD		none	www.epa.gov/superfund/community-involvement-training-program-0	TBD

Shaded trips are closed