

**ENVIRONMENTAL MANAGEMENT ADVISORY BOARD
to the
U.S. DEPARTMENT OF ENERGY**

PUBLIC MEETING MINUTES

December 1, 2022

**Sheraton Hotel
500 Canal Street
New Orleans, Louisiana 70130**

PARTICIPANTS

Environmental Management Advisory Board (EMAB) Members:

David Abelson	<i>Members not present:</i>
Jack Craig	Brent Gerry
Amy Fitzgerald, EMAB Vice Chair	Celeste Greene
Diahann Howard	Kim Kearfott
Elliott Laws	Tracye McDaniel
Frazer Lockhart	
Nicole Martinez	
Josiah Pinkham	
Jim Rispoli	
Michael Shapiro	
Jake Washington	
Shelly Wilson, EMAB Chair	

U.S. Department of Energy Participants:

William “Ike” White, Senior Advisor for Environmental Management (EM)
 Nicole Nelson-Jean, Associate Principal Deputy Assistant Secretary for Field Operations, EM
 Jay Mullis, Acting Associate Principal Deputy Assistant Secretary for Regulatory and Policy Affairs, EM
 Betsy Forinash, Deputy Assistant Secretary for Waste and Materials Management, EM
 Rob Seifert, Acting Director for Infrastructure Management and Disposition Policy, EM
 Kristen Ellis, Director of Regulatory, Intergovernmental and Stakeholder Engagement, EM
 Joceline Nahigian, Director, Office of Intergovernmental and Stakeholder Programs, EM
 Kelly Snyder, EMAB Designated Federal Officer, Office of Intergovernmental and Stakeholder Programs, EM
 Alyssa Harris, EMAB Federal Coordinator, Office of Intergovernmental and Stakeholder Programs, EM
 Michelle Hudson, Office of Intergovernmental and Stakeholder Programs, EM
 Nancy Crislip, Office of Regulatory, Intergovernmental and Stakeholder Engagement, EM
 Aaron White, Director, Office of Regulatory Compliance, EM
 Anita Iacaruso, Director of Communication Services, EM
 Lee Tucker, Office of External Affairs, EM
 Carrie Meyer, Director for Communications, Hanford Site
 Brian Stickney, Deputy Manager, Hanford Site
 Michael Mikolanis, Manager, EM-Los Alamos
 Joel Bradburne, Manager, Portsmouth/Paducah Project Office
 Jack Zimmerman, Director, EM Consolidated Business Center
 Michael Budney, Manager, Savannah River Operations Office
 Rob Crosby, Chief Engineer, EM Field Operations
 Steve Trischman, Director of Budget and Planning, EM
 Chris Crowley, Office of Budget and Planning, EM

Members of the Public:

Daniel Moore, Bloomberg Industry Group, Energy Reporter
 Maura McClelland, Public Utilities Commission of Ohio, Attorney
 Moriah Locklear, Arizona State University, Federal Research Engagement Manager
 Kelsey Shank, theEDGE LLC

LIST OF ACRONYMS

DOE – U.S. Department of Energy
EM – (DOE) Office of Environmental Management
EMAB – Environmental Management Advisory Board
EPA – U.S. Environmental Protection Agency
FACA – Federal Advisory Committee Act
LM – DOE Office of Legacy Management
NE – DOE Office of Nuclear Energy
NNSA – National Nuclear Security Administration
OMB – Office of Management and Budget
PILT – Payment in Lieu of Taxes
R&D – Research and Development
SRS – Savannah River Site, EM
STGWG – State and Tribal Government Working Group

MEETING MINUTES

The U.S. Department of Energy's (DOE) Environmental Management Advisory Board (EMAB) met in a hybrid virtual and in-person setting in New Orleans, Louisiana on December 1, 2022. Participants included EMAB members, DOE staff, and members of the public. The meeting was open to the public and conducted in accordance with the requirements of the Federal Advisory Committee Act (FACA).

The meeting was live streamed on YouTube and the recording can be accessed at the following link: <https://www.youtube.com/@emhqadvisoryboards9046/streams>

Ms. Shelly Wilson, EMAB Chair, called the meeting to order and reminded members that they must recuse themselves from participation in any discussions that would have a direct and predictable effect on the companies, organizations, agencies, or other entities with whom they are personally associated or in which they have a financial interest. Meeting attendees introduced themselves.

Remarks from Senior Advisor for Environmental Management, Ike White

Ms. Wilson introduced Senior Advisor for Environmental Management Mr. William "Ike" White. Mr. White thanked the EMAB for volunteering their time to work with EM. He said that he is proud of the progress that EM made this year. In the process of starting up two of the most crucial capabilities for dealing with tank waste at Idaho and Hanford. He said that the Waste Isolation Pilot Plant has seen success with the emplacement work in panel 7 and can now increase shipment rates, benefiting the entire complex. Mr. White highlighted, specifically, the efforts to ensure that Los Alamos doesn't experience a backlog in shipments to WIPP. He shared that Oak Ridge has seen success with land transfers that were used for economic re-industrialization and continue to work on new opportunities. At Portsmouth, they celebrated the 70-year anniversary of the founding of the site and the successful work there, including recent demolition completion of Building 326.

Mr. White said that he continues to think through the issues that the EMAB has worked on regarding hybrid work environments and recruitment and retention of the EM workforce. He said that employees are the most important resource for the program to be successful. He said he is always considering how to engage, motivate, attract, and retain employees that are passionate about the program.

Mr. White noted that an interactive budget simulation helped stakeholders, states, and tribes understand the challenges to get alignment around the budget and resources. The exercise took place at the Intergovernmental Meeting held earlier in the week. He said the EMAB will have a briefing on the budget and EM Program Plan later in the day.

Mr. White said the EM Program Plan is a framework that looks past the next decade, realizing that the further into the future you plan, the more difficult it becomes to predict what will realistically happen. He said the plan provides guideposts for a direction into the future, but provides flexibility for changes in scope, budget and priorities that will inevitably happen. He

said that the plan shows key variables such as the funding profiles and work scopes. He said the plan will communicate externally what options will need to be considered in the long-term and will provide an opportunity for external feedback and engagement on these ideas as early as possible. He noted that this is the first iteration, and it is a living document that will be updated over time.

Mr. White said that an annual priority document was added to the EM 10-Year Strategic Vision to focus on the next year. He said this helps when communicating with the Office of Management and Budget (OMB) and Congress on annual funding.

Mr. White stated his interest in creating an adaptive management framework for EM. He noted that it can be much easier to get alignment between EM, stakeholders, states, and tribes for short-term planning than long-term planning. He said that disagreements on long-term activities can sometimes hinder short-term alignment. He noted that the EM program stretches far into the future, and the technology development program is an area that must be adaptive to seize opportunities for innovation.

Mr. White said one reason that EM needs an effective research and development (R&D) program is because it would benefit the tank waste program at Hanford. The National Laboratories are starting to create a roadmap for the key areas of R&D that could pay off for EM, including quick wins to demonstrate the benefits of a robust program. He said that the EMAB's perspective would be useful for feedback on how EM might deploy the roadmap.

Mr. White said that across the complex, one of the last things that gets completed is soil and groundwater due to the nature of cleanup. He said that from a community environmental risk perspective, it is a top priority. The National Laboratories are also looking at an overall soil and groundwater strategy and thinking about what investment EM can make that would enhance these efforts and leverage resources across the complex.

Mr. White said that at EM headquarters (HQ), they are looking at how to manage the R&D program from a corporate perspective. He said this review is ongoing and examines whether it is effective to integrate the late-stage and early-stage technology development efforts. He said they are looking for a way to integrate all of EM's R&D efforts to achieve an adaptive technical framework. Mr. White envisions this as part of an overarching adaptive framework for EM, to include an adaptive regulatory framework as well. He said being transparent about an adaptive, long-term plan will help focus external dialogue on short-term decisions, increasing efficiency of decision-making. He envisions the framework as simultaneously more rigorous in the short term and more flexible in the long term.

Mr. White noted that the EMAB has an incredible amount of experience that can think outside of the box about this concept.

Ms. Wilson thanked Mr. White for his remarks and acknowledged the great progress that EM continues to make.

Dr. Fitzgerald said that for the community members, it can be difficult to understand the transition of ownership from EM to the Office of Legacy Management (LM), and how that will occur at larger sites. Mr. White responded that the State and Tribal Government Working Group (STGWG) is interested in the concept of Long-Term Stewardship (LTS) and the Department has put together an LTS working group, comprised of representatives of EM, LM, the National Nuclear Security Administration (NNSA), the Office of Nuclear Energy (NE), and the Office of Science. The group is working on effective strategies for these offices to work together on LTS. He offered EMAB to have a briefing from the LTS working group if members were interested.

Mr. David Abelson mentioned that in 2020, EMAB recommended the opening of an EM office focused on transitioning sites post-closure. Mr. White said that the LTS working group can use this information. Mr. Rob Seifert, EM's Acting Director of Infrastructure Management and Disposition Policy, agreed to take this action.

Mr. Abelson asked how the Justice 40 initiative will affect the arc of cleanup. Mr. White said that some goals of the initiative have already been part of the EM program based on the mission of addressing environmental legacies. He said that at Los Alamos, there is enhanced engagement with the community to develop long-term goals. He said the goal is to be transparent with stakeholders about realistic options before the decisions are made. He said that in terms of engagement, so far this has been successful.

EMAB Report on Recruitment and Retention

Mr. Jim Rispoli presented the [EMAB's Recruitment and Retention subcommittee's report](#).

Mr. Rispoli said that the subcommittee had several meetings that were supported by DOE staff. He said that there have been successful EM recruitment and retention programs in the past that current DOE employees were hired under. EMAB DFO Kelly Snyder and EM's Director of Regulatory Compliance Aaron White were interviewed by the subcommittee based on their participation in such recruitment programs. Mr. Rispoli noted that an extensive orientation program helps new employees understand where they fit into the EM mission. He noted that a rotational program across EM sites and HQ would develop employees' depth of knowledge of the program, which helps with retention.

Mr. Rispoli recognized the low number of EM federal employees under the age of 30 and commented that the EM mission will continue long after the retirement of current employees. He recognized that benefits for federal employees are transportable to other offices and agencies, which should be an attractive point for employees.

Mr. Rispoli is the Chair of the National Academies' Federal Facilities Council Oversight Committee. He noted that EM could benefit greatly from joining the Council's meetings related to personnel retention and hybrid work environments. The meetings are open to federal employees.

Ms. Wilson opened the floor for questions. Mr. Jake Washington, member of the EMAB's Hybrid Work Subcommittee, noted that Mr. Rispoli joined one of their subcommittee meetings

to discuss the nexus between retention and hybrid work. He said that employees are being both lost and retained by new policies, suggesting that new employees in a completely remote environment will feel disconnected, while others may prefer telework. He said that in his experience, some young people left because they actually preferred more time in office, which was the opposite of what was expected. Mr. Rispoli suggested that a survey for current employees' preferences would provide insight. He recognized that many positions in EM will not be able to telework at all.

Mr. White said that he was also a product of a three-year early career development program at another agency, and he agreed with the recommendation on an orientation program. He said that it would have been very difficult for him to have a meaningful experience if it was remote. Mr. Rispoli stressed the importance of having an initial orientation period completely in-person, along with any in-person rotational assignments.

Ms. Diahann Howard thanked Mr. Rispoli for his passion on the topic and the information and experience that he brought to the subcommittee. Dr. Fitzgerald said that she's interested to learn more about how EM can leverage investments in local students to bring them into the program across the complex.

Mr. White said that it can be difficult for mid-career development programs to recruit participants. He attributed this to the target audience of mid-career professionals perceiving that they are too busy. He said convincing the right people to be part of a program can be challenging. Mr. Rispoli said that they did not discuss this within the subcommittee but marketing the program would be key. He suggested having a nomination process for employees to either self-nominate or nominate a colleague. Mr. Abelson said that it takes self-awareness to realize that mid-career programs have value even when you are far into your career. He noted that calling on colleagues to mentor you presents great opportunities at any career level.

Dr. Michael Shapiro said that in his experience at the Environmental Protection Agency (EPA), mid-career development programs often worked well when the employee was able to retain the responsibilities in their role. This reduces their feeling of being pushed out of their current career.

Mr. White said that he appreciated all the hard work that went into writing the report. Mr. Jack Craig motioned to approve the recommendations for submission to DOE. Dr. Fitzgerald seconded the motion. The recommendations were approved unanimously by the members present.

EMAB Report on Hybrid Work Environment

Subcommittee Chair Dr. Celeste Greene was unable to attend the meeting, and Mr. Washington presented the [subcommittee's report](#) in her stead. He noted that the COVID-19 pandemic forced every agency to transition to a new way of working. He said finding a balance to meet the needs of the workforce and the needs of the organization is the challenge ahead. He noted this will require continuous interaction with the workforce to get it right.

Mr. Washington noted that the subcommittee was also asked to focus on how to best function with DOE's stakeholders in a hybrid environment. He said that Mr. Josiah Pinkham brought his experience from the Nez Perce Tribe to the conversation.

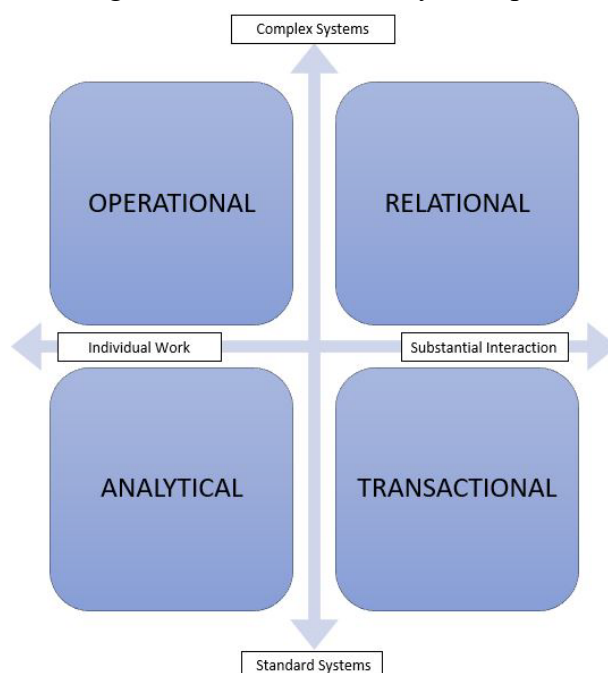
Dr. Shapiro said that because of the pandemic, new ways of working have been discovered. If used correctly, these new ways can strengthen the organization and offer more opportunities and flexibilities. He noted that it is easier to bring together and leverage a diverse set of talents across the country through a hybrid model. He said this can strengthen relationships with stakeholders through more frequent dialogue using virtual tools. He recognized that some critical stakeholders and tribes may face limitations of technology, and EM will need to tailor the hybrid environments to each situation.

Dr. Shapiro said that hybrid meetings can be much more challenging and labor-intensive than solely in person or virtual meetings. He said that investment in running a smooth hybrid meeting with the proper technology and meeting space is crucial.

Dr. Shapiro said that it is appropriate to tailor space allowances for employees to the frequency which they are working in the office. He noted that flexibility is key when building a hybrid culture, focusing on each specific position's requirement or benefit of being in the office. He said it is critical to ensure employees feel they are treated equally in terms of evaluating performance for those working in-person and virtually.

Mr. Frazer Lockhart said that to ensure inclusivity and equity in a hybrid environment, EM will need to focus on objectively and transparently determining which positions are eligible to be completely or partially remote. He said that the EM point of contact for Diversity, Equity and Inclusion (DEI) should be directly involved in any policy decisions on this topic.

Mr. Lockhart offered the following tool to assist with analysis of positions.



Mr. Washington suggested using an online tool to coordinate office hoteling. He stressed that site leadership will know what is best for their workforce. He concluded that the ideal hybrid environment is not one-size-fits-all and flexibility will be key.

Mr. White said that this report comes at a great time, while an interim policy is in place and a more permanent decision will need to be made soon. He thanked the subcommittee for their advice.

Mr. Christopher Crowley from EM's Office of Budget and Planning emphasized that establishing initial relationships in person is critical. He said that being able to connect in person for even a short time is a great benefit to a permanently remote relationship.

Mr. Rispoli suggested conducting a survey of both employees and stakeholders on the pros and cons of hybrid environments.

Mr. Pinkham noted that technology capabilities vary at the Nez Perce Reservation and some areas do not have internet coverage. He said that for them, supervisors need to determine which employees have remote or hybrid work capabilities.

Mr. Washington motioned to approve the recommendations for submission to DOE. Dr. Shapiro seconded the motion. The recommendations were approved unanimously by the members present.

Ms. Snyder thanked the members of both subcommittees for volunteering their time to the mission of DOE.

EM Budget Update

Ms. Wilson introduced Steve Trischman, EM's Director of Budget and Planning. He began by reviewing a map of EM's progress at 15 sites in 11 states. Since EM's inception, the footprint has reduced by 90%.

Mr. Trischman reviewed the top six primary mission areas that are funded: Special Nuclear Materials and Spent Fuel, Radioactive Tank Waste, Transuranic and Solid Waste, Facility Deactivation and Decommissioning, Soil and Groundwater, and Site Services. The Fiscal Year (FY) 2023 amended congressional budget request was \$7.835 Billion, the largest in EM history.

Mr. Trischman said they are currently operating under a continuing resolution until December 16th using the FY 2022 budget. He said the FY 2024 request was submitted to the OMB in September 2022. He said initial planning has begun for the FY 2025 budget. He said the EM field managers will hold a workshop in spring to review their priority lists. Briefings to the Secretary of Energy and DOE Chief Financial Officer will take place in summer of 2023.

Mr. Trischman noted that EM's Office of Budget and Planning has had some turnover during the past three years and training efforts took place for new team members.

Mr. Trischman reviewed highlights of the FY 2023 budget, including infrastructure improvements at the Waste Isolation Pilot Plant to increase waste shipments, commissioning and startup of Direct Feed Low-Activity Waste, and startup of the Integrated Waste Treatment Unit in Idaho. He also mentioned that the 2023 budget continues demolition of excess facilities at Oak Ridge National Laboratory and Lawrence Livermore National Laboratory.

Mr. Craig asked if there are any budget impacts of transitioning ownership at Savannah River Site (SRS) to the NNSA. Mr. Trischman said not yet, but EM is directly funding the legacy pension program and partially funding the Savannah River National Laboratory. He said looking into the future, funding for liquid waste and operations at H-Canyon, two of the most substantial costs, will still be sourced from EM.

Mr. Trischman said that one of the new initiatives in the FY 2022 budget was the Minority Serving Institutions Partnership Program, funded at \$56 Million. EM was able to support Payment in Lieu of Taxes (PILT) at impacted communities, such as Savannah River and Hanford.

Mr. Trischman mentioned the new Community Capacity Building Initiative to help communities that may not be entitled to PILT but would benefit from assistance based on needs identified through Tribal consultation and stakeholder engagement.

Mr. Trischman reviewed the funding levels by site, noting that the budget has seen an encouraging, steady increase over the last few years.

Dr. Fitzgerald asked for clarification on mercury receipts and uranium thorium reimbursements as line items in the budget. Mr. Crowley said that several years ago Congress mandated that DOE is responsible for managing all mercury generated in the United States and may not be exported for disposal. Mr. Trischman said that entities that require mercury disposal will pay DOE to cover costs. Mr. Crowley said the program is not in place yet, and the line item is a percentage of the estimated cost to run the program. Mr. Trischman said that uranium thorium reimbursements are for mining companies that did their own remediation work in the past. He said this liability will be paid off in a couple of years.

Ms. Wilson asked if there is any potential legislation to recognize DOE's groundwater as a special case compared to groundwater remediation at private facilities. Mr. Seifert said that he is not familiar with any potential legislation.

EM Program Plan

Mr. Trischman said that EM issued its Program Management Protocol in November of 2020 with the purpose to establish formal requirements and expectations for planning, budgeting, execution, and evaluation of work. He said that the primary activities are development and maintenance of program plans and lifecycle estimates, and identification and analysis of strategic alternatives.

Mr. Trischman said the EM program's lifecycle estimate is made up of individual EM site estimates and work from other federal offices, such as excess facilities or additional remediation. He said they are working with NNSA, NE and the Office of Science to determine a schedule of prioritization of this work to fit into the overall EM plan.

Mr. Trischman said the EM Strategic Vision, EM Program Plan, and Site Program Plans are the core planning documents for EM. He said these tools lay out EM's options and alternatives that may be more cost effective. He noted that this detailed planning is a great knowledge transfer tool for future EM leadership.

Mr. Abelson asked if it is a bottom-up approach, taking cues from the sites. Mr. Trischman said yes, starting with the sites' current work as the basis for the lifecycle estimate. Mr. Abelson asked if all sites have updated lifecycle baselines. Mr. Trischman said some sites have completed this but not all are finished yet. He said there is a schedule to update them over the course of the year.

Mr. Trischman said the EM Program Plan is organized by EM's major mission areas with appendices including each site's remaining scope and strategies.

EM Regulatory and Policy Affairs Update

Director of Regulatory, Intergovernmental, and Stakeholder Engagement Ms. Kristen Ellis thanked the members for their timely recommendations. She provided an update on the [EM organizational chart](#).

Ms. Ellis mentioned that the Regulatory Center of Excellence at Savannah River National Laboratory was chartered earlier in the year. She said the Center's activities will build on the principles of regulatory partnerships from EMAB's past recommendations. She also mentioned that an update to DOE Order 435.1 Radioactive Waste Management is with DOE's Directives Review Board and will clarify commercial disposal options.

Ms. Ellis said that stakeholder engagement is happening in person more frequently. She said EM is focused on balancing the benefits of virtual flexibilities and face-to-face connections. She said the Community Capacity Building Initiative is an opportunity to increase inclusivity and involve new community members that may be interacting with DOE for the first time. She said the program could include community restoration projects and investments.

Ms. Ellis said that a workforce summit between the Energy Communities Alliance, the Energy Facility Contractors Group, and EM, took place in September. They discussed both near- and long-term workforce challenges and intend to continue the conversations at the Waste Management Symposia in February of 2023. Ms. Ellis said this coordination between EM and its community partners will help EM build long-term recruitment programs such as community college apprenticeships and K-12 curricula. She noted the importance of beginning development of the future workforce in middle school.

Ms. Ellis said that EM connects often with the United Kingdom and Canada to share best practices for issues such as climate change resiliency and stakeholder engagement.

Mr. Seifert said DOE released a comprehensive roadmap for addressing Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS). He said PFAS was discovered in uranium enrichment processing at Oak Ridge's K-25 Gaseous Diffusion Process Building, as well as in coolants and lubricating oils used throughout DOE. He said DOE recently released an initial assessment report. He said DOE made commitments to have drinking water sampled within the DOE footprint by the end of December 2022. EM sites will provide implementation plans for filling data gaps. He said there are some sites that have not detected PFAS such as Moab, however, at Paducah they detected 130,000 parts per trillion in groundwater. He said this is based on very limited sampling and investigations and response actions will continue over the next few years.

Mr. Seifert said DOE is actively engaged with the Department of Defense, Food and Drug Administration, National Aeronautics and Space Administration, and EPA to collaborate on research and development. He said that DOE will work with the local regulators and stakeholders to build plans for filling gaps in data.

Mr. Seifert said EM completed an accelerated groundwater closure review to benchmark the status of groundwater and determine obstacles. He said SRNL is taking the lead on this research. He said they continue to communicate with regulators and stakeholders on solutions.

Mr. Seifert said that EM's infrastructure team is implementing a new infrastructure management and prioritization strategy based on NNSA's robust infrastructure program. He said EM has strong relationships with other DOE program offices to collaborate on excess facilities cleanup and soil and groundwater remediation as land is transferred between offices.

Mr. Seifert noted that EMAB provided a recommendation to create a DOE office focused on transitioning EM sites after the EM mission is complete. He said that his office is currently responsible for excess facilities and deferred remediation transitions, and long-term stewardship management. He said he will be Chair of the Long-Term Stewardship Working Group starting in January 2023. He said a site transition framework document is part of the Department-wide strategy. He said EM works closely with STGWG to ensure cultural resources are being actively considered in long-term stewardship planning.

Mr. Seifert said that EM is working to meet DOE's sustainability goals, including planning for a zero emissions fleet with 226 electric vehicles currently ordered. He said that EM is engaged and committed to meeting the Department's goals and is making great progress.

Ms. Betsy Forinash, Director for Waste and Materials Management, said that EM is looking at a second waste stream that the high-level waste interpretation policy would apply to. This was previously applied to a small waste stream at SRS. She said EM had a public comment period and informational webinars regarding the new stream. She said they expect to public a final Environmental Assessment in 2023 and they are not analyzing any other waste streams at this time.

Ms. Forinash said EM issued a draft Supplemental Environmental Impact Statement in the summer of 2022 on options for long-term mercury storage. She said a final Supplemental Environmental Impact Statement will be issued in early 2023. She said this will prescribe actions for private industry and government for long-term storage of elemental mercury. This is meant to serve until EPA establishes the land disposal requirements for ultimate disposition. She said EM is working with private industry on disposal capability and energy solutions.

Ms. Forinash said that there is a path forward for Advanced Basin De-inventory at SRS which will enable initial processing of spent nuclear fuel inventory at L-Basin to ultimately be vitrified at the Defense Waste Processing Facility. She said this saves an estimated 20 years and \$4 Billion by accelerating the de-inventory.

Ms. Forinash highlighted EM's packaging and transportation program, which trained over 1,700 first responders in 17 states and completed a multi-year effort to update DOE Orders on transportation.

Ms. Wilson noted the location and dates are not set yet for the next EMAB meeting. She thanked the speakers and attendees for their time and adjourned the meeting.