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

PUBLIC MEETING MINUTES

March 24, 2021

PARTICIPANTS

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EMAB Vice-Chair:
Jack Craig

Dispute Resolution Subcommittee:
Shelly Wilson, Subcommittee Lead
Jack Craig, EMAB Vice-Chair
Tracye McDaniel
Josiah Pinkham
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CERCLA/RCRA Integration and Streamlining Initiatives Subcommittee:
Randall Jostes, Subcommittee Lead
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Risk Based Decision Making, Future Land Use Designation, Points of Compliance, Levels of Protectiveness Standards Subcommittee:
Amy Fitzgerald, Subcommittee Lead
David Abelson
Jane Hedges
Kimberlee Kearfott
Nicole Martinez
James Rispoli
Robert J. Thompson

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Mark Gilbertson, Associate Principal Deputy Assistant Secretary, Office of Regulatory and Policy Affairs
Joceline Nahigian, Director, Office of Intergovernmental and Stakeholder Programs
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Members of the Public:
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Joe Wishard, Structural Fabrication Division, Paxton & Vierling Steel
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Mark Clough, INL Settlement Agreement Coordinator, Idaho Department of Environmental Quality
Garrett Bright, Senior Hazardous Waste Permit Writer, Idaho Department of Environmental Quality

LIST OF ACRONYMS

BNL – Brookhaven National Laboratory
D&D – Deactivation and Decommissioning
DoD – U.S. Department of Defense
DOE – U.S. Department of Energy
DFLAW – Direct Feed Low Activity Waste
DFO – Designated Federal Officer
DWPF – Defense Waste Processing Facility
ECA – Energy Communities Alliance
EIS – Environmental Impact Statement
EM – (DOE) Office of Environmental Management
EMAB – Environmental Management Advisory Board
EPA – U.S. Environmental Protection Agency
ETEC – Energy Technology Engineering Center
FACA – Federal Advisory Committee Act
HLW – High-Level Waste
IDF – Integrated Disposal Facility
IWTU – Integrated Waste Treatment Unit
LLW – Low-Level Waste
LTSWG – Long-Term Stewardship Working Group (DOE National)
NAS – National Academy of Science
NEPA – National Environmental Policy Act
NNSA – National Nuclear Security Administration
NRC – Nuclear Regulatory Commission
OMB – Office of Management and Budget
PFAS – Per- and polyfluoroalkyl substances
SNF – Spent Nuclear Fuel
SRNL –Savannah River National Laboratory (DOE)
SRS –Savannah River Site (DOE)
STGWG – State and Tribal Government Working Group
SWPF – Salt Waste Processing Facility
TRU – Transuranic
USC – University of South Carolina
WAC – Waste Acceptance Criteria
WIPP – Waste Isolation Pilot Plant
WIRs – Waste Incidental to Reprocessing

MEETING MINUTES

The U.S. Department of Energy's (DOE) Environmental Management Advisory Board (EMAB) met virtually on March 24, 2021. 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).

Opening Remarks

Mr. Jack Craig, EMAB Vice-Chair, called the meeting to order at 2:30 p.m. ET. He welcomed the attendees and reviewed the logistics of the virtual meeting. Mr. Craig told the attendees that in accordance with FACA, all discussions during the proceedings would be made available to the public in the minutes. He stated that members of the public were given the opportunity to submit written comments to be read into the record during the public comments section of the meeting. EMAB staff did not receive any comments. Any written comments received after the meeting would be written into the minutes. He encouraged those interested in learning more about the EMAB to visit their website at www.em.doe.gov/emab or contact Acting EMAB Designated Federal Officer (DFO) Kelly Snyder at kelly.snyder@em.doe.gov. He reminded any members with a conflict of interest to announce their recusal for the record prior to the discussion.

Mr. Craig briefly reviewed the meeting agenda and then introduced the first speaker Mr. William "Ike" White, Acting Assistant Secretary for the Office of Environmental Management (EM).

Remarks by Acting Assistant Secretary for EM

Mr. White thanked all the EMAB board members for their dedication to public service. He expressed that he continues to be impressed by EM's federal workforce and industry partners' successes during the pandemic.

Mr. White gave his perspective on some of EM's accomplishments over the past year. He emphasized the importance of having alignment between the program, communities, and Tribal Nations surrounding each site. He said that EM has demonstrated an ability to achieve this alignment that has a positive impact on the cleanup work.

Mr. White discussed the new Savannah River National Laboratory (SRNL) management and operating contract that will focus on research and development. He also discussed the advanced manufacturing collaborative at SRS. Through a partnership with the University of South Carolina (USC), there will be collaboration between USC and EM's work at the laboratory to provide synergy for both organizations. Mr. White noted that the Salt Waste Processing Facility (SWPF) is now up and running, which was the last piece of the puzzle in a large liability for the cleanup program. Since it is in the first year of operations, logistics are being worked out to continue ramping up operations and tackling the tank waste mission at SRS. Mr. White credited the success at the site to the alignment between DOE, the community and state regulators.

Mr. White then discussed the Hanford site's progress. Hanford's Direct Feed Low Activity Waste (DFLAW) program continues to be on track to turn tank waste into glass over the next

three years. He expects to meet the regulatory milestone to be fully operational by the end of 2023. He stated that he appreciates the partnership with the community and with the Washington State Department of Ecology and U.S. Environmental Protection Agency (EPA) working through all the details from permits to workforce staffing to working with Congress to continue to get support on the funding side. The alignment is paying off in a program that Mr. White said is on the verge of treating tank waste at Hanford, which is extremely important considering the size of the liability.

Mr. White stated that Idaho is also making good progress on tank waste at the Integrated Waste Treatment Unit (IWTU), and he recognized the importance of IWTU to the community. He noted that this is one of the activities that was impacted due to the pandemic because a lot of the work takes place indoors and in confined spaces. Mr. White emphasized the importance of the safety of the workforce. IWTU is expected to be up and running by the end of the calendar year. Mr. White said that EM is also making progress on the transuranic (TRU) waste program and is looking forward to wrapping up the TRU mission at Idaho in the next decade.

Mr. White said that Oak Ridge is another example of having good alignment between the community and EM. The Oak Ridge site completed deactivation and decommissioning (D&D) of their first major uranium enrichment complex this past year. Mr. White said that this was completed ahead of schedule and under budget, due in part to an excellent partnership with the state and local community.

Mr. White remarked on progress that EM is making at other sites like at the Energy Technology Engineering Center (ETEC). He said that EM worked with the state of California to align their vision for building demolition. He noted that EM expects to complete demolition of all buildings by the end of this year, which is a significant achievement.

Mr. White said that Brookhaven National Laboratory (BNL) was able complete removal of the stack and the skyline has changed. He noted Moab is also making progress and approximately 12 million tons of uranium were moved out of Moab so far. He stated that Portsmouth is beginning D&D efforts at Building 326, which is on schedule to be approximately 40% completed over the course of this year.

He expressed that the incoming administration understands how important the EM program is. He expects support going forward and looks forward to working with the new team. Mr. White opened the floor for questions.

Mr. Craig congratulated Mr. White and the team on the great progress EM has made. He said that he noticed that the organizational reporting chain for EM had changed and that Mr. White is now reporting directly to the Deputy Secretary's office. He asked if this is a permanent change. Mr. White said that he is not sure if it is a permanent change, but he suspects that once a new Deputy Secretary is on board, they would take a look at the organization.

Mr. David Abelson asked what Mr. White sees as some of the biggest technical challenges moving forward. Mr. White said that DOE and the national laboratory system is capable of working through complex technical challenges. He said that one of the biggest challenges is

ensuring alignment with the communities and regulators including decisions on disposal options. This helps EM make the case for funding when alignment is clear and everyone is on board with the same path forward.

Ms. Amy Fitzgerald asked how DOE does a cost benefit analysis for on-site and off-site disposal. She mentioned the challenging situation at Oak Ridge. Mr. White responded that each situation is different in terms of the volume of waste that gets generated and the amount of radioactivity involved in cases where the volume is very low. He said that these options require some judgement by DOE to avoid unnecessarily driving up the amount of shipping and volume. He stressed the importance of having lots of options.

Mr. Frazer Lockhart asked if there were any indicators of shift in policy or particular areas of interest for the new administration – specifically the utilization of the Waste Isolation Pilot Plant (WIPP). Mr. White responded that the entire Department depends on WIPP, not just EM. The newly generated TRU waste needs a disposal capability and WIPP is suitable for such waste. Mr. White does not believe there will be a change in the strong support for WIPP and the understanding that it is a vital part of not just the cleanup program but also other critical nuclear missions within DOE.

Ms. Shelly Wilson said that she appreciates Mr. White's commitment to alignment and asked about the new administration's view on alignment. Mr. White said that the Secretary would agree that alignment of all parties involved in the program is very important and that working collaboratively promotes a successful program.

Mr. Abelson asked about the role of local governments in this alignment. He mentioned that most of the EM Site-Specific Advisory Boards do not include elected officials. He asked Mr. White to discuss opportunities to engage directly with elected officials and secure important political support. Mr. White responded that EM has always had a strong program for local government engagement, including the opportunity to work through the Energy Communities Alliance to collaborate with DOE. He said that there are also other intergovernmental organizations that work with the states' attorneys general and legislatures. From a program perspective, Mr. White said that EM has an obligation to work with stakeholders and Tribes to understand their issues and concerns. He noted that they are very important partners for economic development in the future, especially in some places where historically DOE has been a large part of the local economy.

Mr. Abelson asked if the site managers universally understand that the role local government engagement has at their site as being essential to their success. Mr. White responded that all site managers understand that. He said that each site's local engagement is different, which is typically driven by how the local community prefers to engage, and some of it is driven by the nature of the site. He mentioned that EM is working with the National Nuclear Security Administration (NNSA) on the choreography of engagement between the two organizations and the communities. He also said that he is open to any ideas about how to improve those relationships across the board.

Mr. Bob Thompson mentioned that the Washington Attorney General and the Washington Department of Ecology sent a letter to the Secretary of Energy. He asked about DOE's reaction to that letter. Mr. White said that the new administration is still looking at all policies across DOE. He said that from his own point of view, the High Level Waste interpretation is a sound, science-based approach to ensuring that EM deals with waste according to risk determined from a scientific and technical perspective. He said that the commitment historically with the state of Washington is to try to get alignment because all parties need to be on the same page with respect to the cleanup program in order for it to be successful.

Ms. Tracye McDaniel asked if there has ever been a review of best practices regarding what's worked in terms of local engagement. Mr. Mark Gilbertson, the Associate Principal Deputy Assistant Secretary for the Office of Regulatory and Policy Affairs, said that this has been done many times over the years. He said that the challenge is that they are now focused on a lot of the more technically difficult sites where the completions are not the end of the site. He said there is an opportunity to grow in terms of how communication has changed over the last decade. He mentioned that there is an opportunity to revisit lessons learned from closures and think about what those lessons learned mean in today's environment.

Mr. Craig thanked Mr. White for his time and recognized the progress made under his leadership. He mentioned that he wants the EMAB to continue being constructive for the program and as Vice-Chair, he wants to stay aligned with EM to address areas that are important to them.

He then moved on to the next agenda item to conduct a formal vote on the EMAB's latest recommendation, "Observations and Recommendations on Regulatory Reform." By a unanimous vote, the report was approved for submittal to EM-1.

Public Comment Period

Mr. Craig than asked for any public comments. Kelly Snyder confirmed no written public comments were received.

The following videos were played during the break:
DOE Secretary Jennifer M. Granholm addresses the Waste Management Symposium
Message to America from Secretary Granholm
The Environmental Management Story

The meeting resumed at 3:30 p.m. Mr. Craig welcomed everyone back and introduced the next speaker, Mr. Mark Gilbertson, Associate Principal Deputy Assistant Secretary for the Office of Policy Affairs.

Regulatory and Policy Affairs Update

Mr. Gilbertson, Associate Principal Deputy Assistant Secretary, Office of Regulatory and Policy Affairs, said his EM office is a mix of activities that are related to regulatory and policy affairs including managing relationships with stakeholders. Mr. Gilbertson reviewed some of the hot

topics EM is currently working on and a summary of where things stand regarding waste management, spent nuclear fuel (SNF), and EM's disposal options.

Mr. Gilbertson said that one important issue is Per- and polyfluoroalkyl substances (PFAS). These man-made chemicals have been manufactured and used across the United States since the 1940s. EPA has a PFAS standard for drinking water, but nothing further currently. DOE is joined by other governmental agencies with federal facilities facing issues related to PFAS and is continuing to work within this topic area. PFAS is more of an issue for the Department of Defense (DoD) than DOE; however, EM has found some instances of PFAS at some of its sites. EM is working with federal partners and collecting information on where PFAS exists and is exploring how EM will manage the issue going forward and plans to keep the EMAB updated. Mr. Gilbertson said that EM is expecting a report on PFAS prevalence to come out in the next several weeks from some of the background information that has been collected from sites.

Mr. Gilbertson said EM has been very successful in continuing its mission during the ongoing COVID-19 pandemic and will continue to package and transport materials for disposition. He said that not only is EM responsible for shipping materials, but they are the lead organization within DOE which organizes the training of all personnel along all the shipping and pathways for DOE. EM has conducted significant training for first responders. EM is also bringing its experience with SRS and Idaho to the Hanford site and is looking at using the Waste Incidental to Reprocessing (WIRs) to demonstrate where EM has removed radionuclides to the maximum extent technically and economically practical from tanks in the C-Tank Farm, in the vitrified low activity waste process and in the test bed initiative where EM can potentially dispose of materials as low-activity waste.

Mr. Gilbertson said that his organization not only supports EM's National Environmental Policy Act (NEPA) activities, but also work with sites that have ongoing DOE missions. His office works with NNSA on the surplus plutonium disposition and its environmental impact statement (EIS) and does work with the Office of Nuclear Energy (NE) on their versatile test reactor EIS. Mr. Gilbertson said that he believes the administration is serious about the NEPA process and his organization is responsible for executing those activities. He said that despite COVID-19, EM still had numerous shipments to WIPP.

Mr. Gilbertson said that his organization is responsible for interfacing with intergovernmental groups. Following some of the virtual webinars, EM leadership has spoken as a group to address how EM can take advantage of the lessons learned and best practices developed during this time. He said he thinks there have been some positive things EM has done with the virtual community meetings that have allowed more people to access. Mr. Gilbertson said that EM's tribal activities and relations are run out of his office. EM led the agency on working with tribes and with the State and Tribal Government Working Group (STGWG) on long-term stewardship (LTS) activities. The Secretary of Energy will be holding tribal listening sessions and has one scheduled soon. EM is working on organizing its participation in this and is assisting in getting the EM-focused tribes to participate as well. Mr. Gilbertson reminded the Board that EM has interfaces with University-led organizations with which EM does research and involves their students in the EM program. This initiative is strong and has been quite successful. Mr. Gilbertson opened the floor for questions.

Mr. Lockhart brought up LTS and said that he thinks these activities can be a multiplier for some of the more difficult cleanup decisions EM makes. He said that he hopes EM continues this and expands community and tribal dialogues. Mr. Gilbertson agreed and said that EM has created a stronger partnership with the Office of Legacy Management (LM) through the DOE National Long-Term Stewardship Working Group (LTSWG) that has been established, as well as a national lab group that's been created across both organizations. The group recently issued an updated charter that allows the laboratories to work jointly on issues with both EM and LM.

Ms. Fitzgerald encouraged EM to continue utilizing virtual meetings and resources. She said it is important to make sure notices for the virtual meetings are distributed widely.

Mr. Craig asked if the contractor at SRNL will have a larger role in supporting the EM program with the new standalone contract in place. Mr. Gilbertson said that EM is working closely with SRS and SRNL and that they have weekly meetings with site and lab management about the transition as they move forward. He said that they are looking for SRNL to play a leadership role as EM moves forward. EM is working together to ensure everyone is on the same page and he is excited about the partnership the lab has created with the university network in that area. He added that EM is still very cognizant about the NNSA program functions and that half of the SRNL resources.

Ms. Hedges asked if the EM-EPA working group still meets. Mr. Gilbertson said that it does.

Mr. Gilbertson then spoke about SNF. He said that the radioactive waste that was generated from reprocessing SNF is only at four sites across the complex. For the defense side, it was the fuel that was reprocessed to remove uranium and plutonium for the strategic weapons. At West Valley, it was materials that fuels were reprocessed for commercial activities for power generation.

Mr. Gilbertson discussed the inventory of SNF at the sites. At Hanford, EM has not begun the treatment process, but has constructed the facilities for vitrification. EM's strategy at Hanford is similar to the strategy at SRS where the waste is divided into two streams, a low radioactive stream and a higher radioactivate waste stream. He reminded that at Hanford these materials have already been reprocessed several times. The current disposition path for some of the tank waste is the waste treatment and mobilization plant, which consists of a pre-treatment facility, a HLW facility and DFLAW facility. The pre-treatment facility would receive pretreated separate liquid from the tank farms and the pretreated waste would be transferred for vitrification. EM's current assumption is that just under 8,000 canisters of material would be produced. Those canisters would be stored in interim storage at Hanford. About 52,000 canisters of material will be processed through the DFLAW facility, vitrified, and stored in canisters in interim storage. One of the keys there is to use tank-side cesium removal capability to pretreat some of the waste to feed to the law facility for vitrification. EM's amended consent decree has DFLAW starting in the December 2023 timeframe.

Mr. Gilbertson stated that SRS is dealing with vitrified waste. EM has already vitrified over 4,000 canisters and has another 4,000 canisters to go. Those glass canisters are stored in two storage buildings and will be there until EM finds a final disposition site for those materials.

Mr. Gilbertson said that with the HLW interpretation, EM is looking at ways that waste could be classified based on its geological characteristics and not the origin of the waste. In August 2020, EM issued documentation to allow material to go to Waste Control Specialists. EM is making progress and being transparent by taking small deliberate steps for stakeholders to understand what EM is doing. Currently, EM has no plans to move forward with using those definitions at Hanford. EM will continue to work with the stakeholders in Washington state and with its regulators on this.

Mr. Gilbertson said that there is a lab-university study that the National Academy of Science (NAS) is reviewing regarding alternatives for processing materials for disposition of low activity waste. He offered to share the initial reports with the EMAB if there is interest.

Mr. Gilbertson said that West Valley was the first site to complete vitrification operations, with 600,000 gallons of tank waste that has been vitrified and the glass containers are in storage at the site pending final disposition. Nearly 300 canisters of vitrified waste are safely stored in interim storage in 56 casks. The casks have a designed life for 50 years and each cask is built onsite and constructed of 20-inch-thick reinforced concrete and contains four-inch-thick stainless-steel liners. This design was based on nuclear fuel dry storage systems used throughout the world.

Mr. Gilbertson provided a summary map of the disposal sites that are available to EM. The Washington State, U.S. Ecology, and South Carolina Barnwell commercial disposal sites do not accept DOE waste as they are limited to LLW compact waste generators. All the waste shipped to those individual sites are done in accordance with each site's individual waste acceptance criteria (WAC). The WAC are driven by the performance assessments of the unique genealogies and settings of each of its disposal sites. The only DOE site that receives off-site material besides WIPP is the Nevada National Nuclear Security Site (NNSS) and they receive off-site LLW and mixed LLW. NNSS is where EM dispositions materials that are of a classified nature. The IDF at Hanford is the only LLW site in the world that requires vitrification of LLW. WIPP is currently prohibited from disposing of waste that was managed as HLW. A permit modification is required to receive and reprocess tank waste.

Mr. Gilbertson continued his presentation with pictures of some of the activities EM has going on, like the calcine retrieval demonstration. Although the NAS has said it is safe in the bins for 500 years, EM has a regulatory agreement that the materials will be road ready in 2030, which is why that demonstration is moving forward.

Mr. Gilbertson's next slide showed the inventory of EM's SNF. EM stores approximately 2500 metric tons of SNF principally at four sites. About one percent of the master inventory is at SRS, and most of that fuel is stored in the L-Basin in a wet fashion. EM is evaluating an approach of processing the SNF in L-Basin through H-Canyon without recovery of uranium, which has potential to allow closing of L-Basin and shutting down H-Canyon ahead of schedule, reducing EM's long-term liability.

EM's Idaho office also manages SNF at Fort Saint Vrain. Idaho has about 285 metric tons of the fuel. The Idaho Settlement Agreement required EM to move all of the SNF from wet to dry storage by 2023. The program is working cooperatively with NE to meet that milestone. The vast amount of material at Idaho is already in dry storage. At Hanford, EM stores about 2,100 metric tons in a dry storage configuration, and more than half of this SNF is packaged and stored in the canister storage building awaiting final disposal. The remaining SNF is in dry storage casks in the interim storage area and currently no further action is anticipated for this portion of the inventory until there is a specific destination to send it.

Mr. Gilbertson mentioned a key success factor for EM is to be able to have sites to disposition the material. EM is going to be a user of the HLW repository, but EM is going to work hard to ensure they have multiple options going into the future. Mr. Gilbertson opened the floor for questions.

Ms. Hedges said a concern with the HLW interpretation is that the final authority now rests solely with DOE instead of also with NRC under the previous WIR process. She wanted to know how EM would respond to that concern.

Mr. Gilbertson cited the situation at SRS as an example of EM trying to proceed in an open and transparent manner. He said that things are moving slowly and methodically. EM is explaining exactly what and how they are dispositioning. EM believes that they were following the process to disposition these materials in a safe and effective manner. EM is utilizing its current regulatory framework for things like the materials that are going to stay at C-Tank Farm, so that it is an open process to demonstrate that the tanks are clean. EM is going to do its work in a transparent manner and it is hoping that the work at SRS demonstrates this.

Ms. Fitzgerald asked Mr. Gilbertson for clarification on Oak Ridge issues relating to an upcoming ROD, tearing down buildings at Y-12 and the issues of a mercury WAC.

Mr. Gilbertson said he understands that Oak Ridge concerned about the mercury issue and EM needs to be transparent. He cited the building of a treatment system to protect D&D operations. He said that EM would continue to work with her to make sure that she knew that this was being done in an open way that she could understand as they moved forward.

Mr. Rispoli asked Mr. Gilbertson who he saw as the most likely group that would object to the science-based approach regarding waste classification.

Mr. Gilbertson said that over the years, some groups lost some trust in DOE. EM is working to rebuild that trust. He said that there are other entities that are anti-nuclear and don't want to necessarily see a permanent repository as a way for the nuclear enterprise to continue to operate into the future. He added that most of EM's communities do want to work with the program and EM owes it to the communities address these issues. He said that the Secretary of Energy is committed to making progress and working with the communities to complete the cleanup mission.

EM Budget Presentation

Mr. Trischman, Director of EM's Office of Budget and Planning, noted that the 2022 budget was not yet released, so he planned to give a status on the 2021 budget. He shared the budget timeline for the year. He said that they were preparing to begin planning for the fiscal year 2023 budget and they are meeting with the sites for prioritization and planning for 2023. The 2022 budget, which went to OMB last September, has been slightly delayed due to the transition to the new administration. Typically, the administration will release the top line number for each Department and the priorities for the program, but there won't be any details on the EM budget specifically. He said they are preparing to meet with OMB to begin drafting the budget. He said that Congress is used to getting the budget in February, and having the briefings and hearings in the Spring, which would give them much longer to work on the budget. This means that their schedule is going to be compressed for the 2022 budget this year. He said this is normal for any transition to a new administration.

He displayed a chart showing how the $7.6 billion budget is allocated. He noted that SRS and Hanford have the bulk of the HLW to treat which requires additional funding. He displayed a chart showing increased support from Congress on the cleanup which helps because they are the final decision makers on how much funding is made available for the cleanup.

Mr. Trischman continued, showing the control point structure. He noted that Congress is very specific about where they want the funding to go. The chart showed how many control points each site has. He added that especially for a site like Oak Ridge, where there are several defense control points as well as non-defense D&D, it means the money is very compartmentalized. He said that if EM wanted to spend above the amounts of a control point, they would have to do a reprogramming, which can take a long time, and is generally only done if urgent.

Mr. Trischman discussed the SRS budget in detail based on his prepared slides. He discussed their funding for risk management operations, solid waste (non-TRU), D&D, and basic infrastructure investments including roads and security systems. He also mentioned the Advanced Manufacturing Collaborative (AMC) facility, which is a brand-new lab facility that will be built on the University of South Carolina Aiken campus. He said that this allows EM to do more collaborative work with the University. He mentioned funding for payment in lieu of taxes to communities for land taken over by the site that was within the tax base, but no longer able to bring in tax revenue.

Mr. Trischman noted that tank waste is a priority at SRS where the inactive funding level has been steadily going up due to completion and operation of SWPF. He said they will be ramping up the liquid waste operations to almost nine million gallons a year. This would need to be processed through the SWPF and the Defense Waste Processing Facility (DWPF). This causes DWPF to run at a higher rate. He said that almost everything must operate at a higher rate than has ever been demonstrated at SRS, but the payoff is that the liquid waste mission can be done in about 12 years. He added that SRS also has a very large safeguard and security budget because they are storing the largest amount of nuclear material.

Mr. Trischman discussed the magnitude of Hanford's tank farm mission. He discussed a number of upgrades happening at the site and the tank farm integrity program that will continue to evaluate the tanks and how they are aging. He added that Hanford is also continuing to retrieve waste out of single shell tanks where pumpable liquid waste has been retrieved and removing any solids. He also briefly discussed the Tank-Side Cesium Removal (TSCR) project, which is going well and will allow preparation of tank waste for DFLAW. He discussed the measures being taken to be able to begin operations at DFLAW by the end of 2023.

Mr. Trischman then discussed the Richland budget, which will allow the Plutonium Finishing Plant work to be completed. He also discussed plans to operate the groundwater treatment system on the central plateaus, and package TRU waste. He said that on the river corridor side, there is funding for risk mitigation of aging structures. He discussed the evaluations for underground tanks at the 326 waste site under the 324 building that will eventually be demolished. Funding also supports K Basin work, infrastructure maintenance, and payment in lieu of taxes to the community.

Mr. Trischman then discussed Carlsbad's budget, noting that WIPP is key to disposing of all TRU waste. He added that a new ventilation system and shaft will help with air flow and allow a faster pace of operations. He said that while WIPP is not old, it is still in need of infrastructure improvements. He said that there have been many workforce challenges due to the New Mexico oil boom, causing a backlog of infrastructure projects. He also discussed electrical infrastructure needed for battery powered equipment and vehicles in the mines that will greatly improve air quality.

Mr. Trischman noted that EM was directed by Congress to look at WIPP's impact to New Mexico roads, and it is still being determined what that impact is and if assistance will need to be provided to the state.

Mr. Rispoli asked if the number of air changes in the WIPP ventilation system are compliant with recommendations from the Center for Disease Control with regards to COVID-19. Mr. Trischman said that it is an extremely high-capacity system, and he agreed to follow up with specifics.

Ms. Wilson asked about the delayed infrastructure projects at WIPP, and if an increased budget mitigates those delays. Mr. Trischman said that there is still a backlog, but there is funding to get it completed.

Mr. Trischman then discussed Idaho, where they have retrieved waste and prepared it for shipment to WIPP. He discussed excavation at Idaho that will be completed soon, which will be followed by closing the STUs. Idaho continues to operate the SNF facility. He noted that the IWTU operations were impacted by COVID-19 because it is a small space. He said that this year, Idaho's main focus is to keep shipping TRU waste and to get IWTU started.

Mr. Trischman said that Los Alamos continues to work on the groundwater and surface water contamination with the chromium plume, as well as the RDX plumes. Los Alamos has waste that is buried that has to be retrieved before shipping to WIPP. He mentioned DP road, which was

contamination located off-site, but the land was transferred from DOE to the community, which is now being redeveloped. EM is in the process of doing characterization and remediation work there.

Mr. Trischman stated that Oak Ridge funding is split into defense accounts and the uranium enrichment D&D accounts. On the defense side, EM is processing the U233 material and capturing thorium which will be made available for cancer research treatment. Oak Ridge is finishing up the building 2026 hot cell work. They are also operating the TRU waste processing center for debris waste. Mr. Trischman said that on the D&D side, they have wrapped up D&D of ETTP's gaseous diffusion plant and the workforce has been able to transition over to Y-12 and ORNL D&D work. He noted that with technology development funding, Oak Ridge continues to look at mercury treatment technologies for upcoming demolition of mercury contaminated facilities.

Amy Fitzgerald asked if Oak Ridge is considered a small site. Mr. Trischman responded no. For clarification, he said that there is a small amount of money at Oak Ridge in a non-defense account and that is within the small site control point. For example, there was funding for ETTP to set up a historic preservation facility.

Mr. Trischman then discussed the work at Portsmouth, including demolition of the X326 Building. He said that they will use their on-site disposal facility for a large amount of the minimally contaminated debris, and the more contaminated materials will go off-site. He also discussed funding for operation of the depleted uranium hexafluoride convergent plant.

Mr. Trischman said that Paducah is operating the DUF 6 plant and continuing to work on cleaning the facilities and prepping them for demolition, as well as handling the source of groundwater contamination. He noted that once ETTP is done, there will be more focus on completing the Portsmouth mission.

Mr. Trischman continued his presentation with West Valley. The West Valley budget has gone up in the last couple of years and that has helped progress the main plant processing building. He noted that this work has been slowed down because of COVID-19 since the work has to be done inside a hot cell facility with limited space. Once demolition work is done the next focus will be on cleanup of the soil.

Mr. Trischman briefly discussed progress at ETEC and Moab. At ETEC, they are on track to finish demolition of the last few facilities there this year, and then the focus will turn to remediating the soil. At Moab, mill tailings are being moved very successfully and that work continues.

Mr. Trischman discussed Nevada, where half of the funding is for operation of disposal facilities for waste from other sites that don't have on-site disposal capabilities for certain wastes. He noted that monitoring wells, soil remediation, and D&D work has been progressing well. He also discussed work at Lawrence Livermore, which has several excess facilities that have begun D&D.

Mr. Trischman mentioned that Sandia is implementing some groundwater remediation projects and the Separations Process Research Unit has completed cleanup work but is evaluating certification options for remaining TRU waste that will be shipped to WIPP.

Mr. Trischman discussed some additional line items: funding for closure sites that covers the legal cost for maintaining closed sites, mission support that includes the minority serving program and technical field support, federal workforce, and the technology development program.

Mr. Craig thanked Mr. Trischman for his presentation. For an EMAB administrative update, Ms. Snyder said that they were able to reappoint several EMAB members at the end of September and those appointments are for two-year terms. She also noted that a handful of members' terms will be expiring at the end of next September, so in the next month, she will be reaching out to discuss expiring members' interest in being considered for another term. She said that they are currently soliciting nominations of new members. She noted that a new charge for the EMAB will come after the new administration has time to fully understand what the EMAB does, and the history of the board. The EMAB's next meeting will be in fall. She opened the floor for questions.

Mr. Abelson asked if the EMAB will not meet until the new members are appointed. Ms. Snyder responded that she anticipates holding a meeting October 1st or later to include any new members that may be appointed, but that is not finalized. She said she will get a tentative date to have the members hold on their calendars. Mr. Craig thanked Ms. Snyder and Ms. Alyssa Harris their work for the Board. He also thanked the speakers today for taking the time to give informative presentations.

Ms. Snyder thanked Mr. Craig for guiding the meeting. She announced that her detail as the DFO for the EMAB has ended, but she was selected to fill the position permanently.

Mr. Craig adjourned the meeting at 5:30 pm.