

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

**PUBLIC MEETING MINUTES**

**Canopy by Hilton – The Wharf  
975 7th St SW  
Washington, DC 20024  
December 3, 2019**

## LIST OF ACRONYMS

BRAC – (Department of Defense) Base Realignment and Closure  
CRO – Community Reuse Organization  
DFO – Designated Federal Officer  
DOE – U.S. Department of Energy  
EM – (DOE) Office of Environmental Management  
EM CBC – Office of Environmental Management Consolidated Business Center  
EMAB – Environmental Management Advisory Board  
EM SSAB – Environmental Management Site-Specific Advisory Board  
FACA – Federal Advisory Committee Act  
Hanford – (DOE) Hanford Site  
HQ – U.S. Department of Energy Headquarters, Washington, D.C.  
IDIQ – Indefinite Delivery Indefinite Quantity  
NAS – National Academy of Sciences  
NNSA – National Nuclear Security Administration  
Oak Ridge – (DOE) Oak Ridge Site  
Portsmouth – (DOE) Portsmouth Site  
Paducah – (DOE) Paducah Site  
R&D – Research and Development  
SRNL – Savannah River National Laboratory  
SRS – (DOE) Savannah River Site  
TD – Technology Development  
TRU – Transuranic Waste

## PARTICIPANTS

### Environmental Management Advisory Board Members:

David Abelson, Abelson Partners  
 Jack Craig, ATKINS Nuclear Secured, EMAB Vice-Chair  
 Mark D. Fallon, Envirocon  
 Amy Fitzgerald, City of Oak Ridge  
 Jane Hedges, Consultant  
 Diahann Howard, Port of Benton  
 Carol Johnson, Consultant, EMAB Chair  
 Randall Jostes, Environmental Liability Transfer, Inc.  
 Kimberlee Kearfott, University of Michigan  
 Frazer Lockhart, HII Nuclear, Inc.  
 Tracye McDaniel, McDaniel Strategy Ecosystems  
 Josiah Pinkham, Nez Perce Tribe  
 Timothy Runyon, Consultant  
 Robert J. Thompson, Energy Communities Alliance  
 Shelly Wilson, Longenecker & Associates

### Board members not present:

Elliott Laws, Crowell & Moring LLP  
 Nicole Martinez, Clemson University  
 James Rispoli, Project Time & Cost, LLC

### Department of Energy Participants:

William “Ike” White, Senior Advisor for Environmental Management to the Under Secretary for Science  
 Todd Shrader, Principal Deputy Assistant Secretary for Environmental Management  
 Betsy Connell, Associate Principal Deputy Assistant Secretary for Regulatory and Policy Affairs  
 Mary Kruger, Acting Director, Regulatory, Intergovernmental, and Stakeholder Engagement  
 Leonard Spearman, Senior Advisor, Environmental Management  
 Daniel Thayer, Special Assistant, Environmental Management  
 Kurt Heckman, Director, Office of Secretarial Boards and Councils  
 Allison Mills, Deputy Director, Office of Secretarial Boards and Councils  
 Kurt Gerdes, Director, Office of Technology Development  
 John Lee, Office of Technology Development  
 Mike Nartker, Director, Congressional Services and Information  
 Aaron Deckard, Acquisition Integration Lead, Environmental Management Consolidated Business Center  
 David Borak, Designated Federal Officer, Environmental Management Advisory Board  
 Jared Bierbach, Office of Regulatory Compliance  
 Alyssa Harris, Contractor Staff, Office of Intergovernmental and Stakeholder Programs

### Non-DOE Attendees

Corey Pacer, Leidos, Inc.  
 Tim Smith, Waste Control Specialists

## MEETING MINUTES

The U.S. Department of Energy's (DOE) Environmental Management Advisory Board (EMAB) met on December 3, 2019 at the Canopy Hilton in Washington, D.C. Participants included EMAB members, DOE staff and contractor support staff. The meeting was open to the public and conducted in accordance with the requirements of the Federal Advisory Committee Act (FACA).

### **Opening Remarks**

Ms. Carol Johnson, EMAB Chair, called the meeting to order at 8:30 a.m. ET. She welcomed the attendees and thanked Senior Advisor for Environmental Management (EM) to the Under Secretary for Science Mr. William "Ike" White for joining them.

Ms. Johnson told the attendees that in accordance with FACA, all discussions at this meeting would be made available to the public in the minutes. She stated that there will be an opportunity for public comment at 2:30 PM ET. She reminded all registered lobbyists that they must identify themselves as such before speaking during public comment period. She also asked any members with a conflict of interest to announce their recusal for the record prior to the discussion. She encouraged those interested in learning more about the EMAB to visit their website at [www.em.doe.gov/emab](http://www.em.doe.gov/emab).

The attendees each introduced themselves and their titles. Mr. Jack Craig introduced himself as EMAB Vice-Chair. Members that attended the meeting via phone were, Ms. Jane Hedges, Ms. Kim Kearfott, Ms. Tracye McDaniel, and Mr. Josiah Pinkham. Members not in attendance included Mr. Elliott Laws, Ms. Nicole Martinez and Mr. James Rispoli.

### **Remarks from the Senior Advisor for EM to the Under Secretary for Science**

Mr. White introduced himself and discussed his background working on the Defense Nuclear Facility Safety Board and for the National Nuclear Security Administration (NNSA). He discussed the importance of EM's mission and the importance of the government following through with its commitments. He added that EM's work is very complex and challenging, but there have been many successes in recent years. He noted that EM started with 107 sites and is currently down to 17, but those 17 are sizable. He also noted the progress on Building 324 at Oak Ridge and the treatment of over 20 million gallons of waste at Savannah River Site (SRS). He mentioned the progress at EM's Waste Isolation Pilot Plant, receiving 13,000 shipments from across the complex, and at Moab, remediating 10 million tons of soil.

Mr. White said that the EMAB's recent charges are in line with EM's priorities. With limited budget, EM must be innovative to drive progress. He said that he looks forward to hearing the EMAB's input on the charge they will be discussing today. He discussed a potential new charge regarding the efficiency of EM's technology development efforts under a strained budget. He thought that the diverse expertise of the EMAB members may provide an interesting perspective of this issue.

Mr. White thanked the Board for their hard work and opened the floor for questions.

Mr. Craig asked Mr. White what his plans are to address human capital issues long-term. Mr. White responded that the workforce and resources are key to achieving goals. He said they are focused on specifically addressing issues related to the end-state contracting approach and accelerating hiring.

Ms. Amy Fitzgerald said in the past, Oak Ridge had a committee dedicated to technology development and would be interested in learning more about the relationship between EM and the National Laboratories regarding research and development (R&D).

Mr. Frazer Lockhart asked if there were any interesting perspectives that came out of the dialogue at the recent Combined Intergovernmental Meeting. Mr. White said that much of the discussion was related to budget and how the process can be influenced. He said that one of the most effective tools are specific areas of site progress and achievements that showcase results.

Mr. Randall Jostes asked if closed nuclear power facilities fall under the EM mission. Mr. White responded no, but in the past, Congress has assigned EM missions that did not originate as EM missions.

Mr. Robert Thompson asked Mr. White about the path forward for holistic talks between DOE, the state of Washington, and the community on the cost of cleanup and other more specific issues. Mr. White said that the conversations with the state are in the early stages. He said that the complexity of the work at Hanford affects the difficulty and length of these discussions.

Mr. David Abelson asked Mr. White to describe his vision for EM. Mr. White responded that there are short-term priorities and long-term priorities that will be passed off to his future successor. He said that short-term priorities include tackling tank waste, while long-term priorities include setting the groundwork in areas such as technology R&D and end-state contracting.

Ms. Johnson thanked Mr. White for his time and reaffirmed the EMAB's commitment to supporting the EM mission.

### **Remarks from the DOE Under Secretary for Science**

Under Secretary for Science Mr. Paul Dabbar discussed some major successes of the EM program. Over the past year, cleanup was completed at the Separations Process Research Unit, deactivation and decommissioning was completed at the vitrification plant at the West Valley Demonstration Project, operations are beginning at the Salt Waste Processing Facility at the Savannah River Site, and K-Basin at Hanford was cleaned and closed ahead of schedule and under budget.

Mr. Dabbar emphasized the importance of showing concrete progress to gain budgetary support from Congress. He said that this year, EM has been able to show much progress. He said that this

is a cycle of each project reinforcing and supporting the others. He noted that each site depends on one another and if a site delivers results, then the positive effects are felt across the complex.

Mr. Dabbar said that EM's engagement with local communities is quite strong. He said that EMAB is a representation of that and emphasized the importance of their work.

Ms. Carol Johnson asked how Mr. Dabbar expects to see EM funding levels, given the program's recent successes. He responded that the DOE budget had broad support from Congress over the past two years, and the EM budget this year had wide support from both the House and the Senate. He said that EM's job is to continue to improve.

### **EMAB Report Discussion – Accelerating Cleanup Completion and Closure across the EM Complex by Facilitating Workforce/Community Engagement and Transition**

Ms. Shelly Wilson, Subcommittee Co-Chair, explained the premise of the report, stating that the workforce and community have a tremendous impact on the mission, and are impacted greatly by site closures. The report examines how EM can ease this transition to closure by leveraging partnerships and opportunities.

Ms. Wilson reviewed the lines of inquiry for the report:

1. Establish opportunities to partner with state and local governments, local chambers of commerce, economic development organizations, and community members
2. Obtain state/local government and workers support for completing the cleanup mission
3. Identify and advance economic development efforts and facilitate future use planning
4. Design and implement worker transition programs, including reemployment assistance
5. Foster a cultural change from production to cleanup
6. Engage in meaningful discussion and develop productive relationships with the labor unions
7. Recognize and understand past efforts, Office of Management and Budget and Congressional direction on the topic

Ms. Wilson said that each line of inquiry is discussed at length in the full report. Each subcommittee member took the lead on one line of inquiry. Ms. Wilson thanked all those who supported the subcommittee's research.

Ms. Wilson reviewed the central ideas of the report. She said that at the Department of Defense (DoD), there is an Office of Economic Adjustment, which oversees Base Realignment and Closure (BRAC). She said that this parallels to the work EM is doing and suggested that there is much to learn about how this office deals with issues such as workforce transition after closures, and community reuse visioning.

Mr. Lockhart discussed the importance of managing culture change throughout the transition, and pinpointing the most important issues through the eyes of the community.

Ms. Wilson emphasized the importance of an aligned vision between all parties through the very end. She said that the report includes a recommendation based on a tried and true DoD approach: partnering with Community Reuse Organizations (CRO) that would reach out to all stakeholders and speak to DOE with one voice and vision. She said that this would create a reuse plan with full awareness of the realities of the land and coalesce a common vision.

Ms. Wilson said that timing is key to realizing market opportunities. She said if the reuse plan takes more than two years, the developers will lose interest.

Ms. Wilson also said that there is a critical need for integrated communication, planning and schedule coordination.

Mr. Abelson discussed the importance of coinciding national priorities with local interests by determining a shared vision. He said that much of EM's success is dependent on non-EM parties. He said that in the report, the EMAB recommends the creation of an EM transition office, which concretely shows the need for EM Headquarters (HQ) leadership on site transitions. He added that ensuring political and community support for closure is the key to successful cleanup, as evidenced at Rocky Flats.

Mr. Abelson said that this office should be led by a seasoned EM manager with diverse field and HQ experience who would have open communications with site managers, HQ leadership, and the EM Consolidated Business Center (EM CBC). He noted that the intent of this office would be to supplement the current work that is being done on transitions.

Mr. Jostes said that EM has not been focused on a firm fixed price contracting approach. Firm fixed price contracting provides for a price that is not subject to any adjustment on the basis of the contractor's costs. This places maximum risk and full responsibility for all costs and resulting profit and loss on the contractor. It provides maximum incentive for the contractor to control cost and perform effectively. Mr. Jostes said DoD widely used this for their BRAC program. He said that this approach is becoming widely used in the federal government.

Mr. Jostes said that there are many benefits to using this approach, including obtaining cost certainty, incentivizing the contractor, reducing management oversight costs, and expediting the delivery of an asset to the community. He added that if EM is interested in a more detailed analysis on firm fixed price contracting, the EMAB would be glad to look further into it.

Ms. Wilson discussed lessons learned from the subcommittee's research of DoD's BRAC program. She said that DoD has enabled legislation for transition funding, completed timely community reuse plans, and successfully implemented firm fixed price contracting. She also said that DoD has a focus on adaptive use, or reuse similar to past or present use.

In closing, Ms. Wilson said that the recommendations in the report emphasize early planning and communication to avoid losing strategic opportunities.

Mr. White acknowledged that economic development is not a core capability of EM, but it is a core capability of local governments. He said that at times, EM can be flexible on certain

priorities and schedules in order to accommodate community vision. Ms. Wilson said that the CROs coordinate with the marketplace and the community to gather input and integrate this into the preferred reuse plan. She added that this helps EM remove themselves while still following the dialogue.

Mr. Jostes added that some communities are more established and better prepared for transition than others.

Mr. Abelson said that much of the opportunity is driven by local EM leadership and how they communicate with the community. He added that part of the challenge is getting local officials engaged in a substantive way.

Mr. White said that the end-state contracting model is set up to allow for fixed price contracting through the Indefinite Delivery/Indefinite Quantity (IDIQ) approach. He said that EM could use input on which scopes of work are most amenable to this.

Ms. Johnson asked if the report discusses the skill set needed for the Office Director position of the proposed EM Transition Office. Mr. Abelson said that the report does not go into specifics. Mr. Lockhart added that strong networking skills will be necessary. He said that the qualities become clear when considering the responsibilities of the role.

Ms. Diahann Howard added that the position must be filled by someone with an economic development background. She stressed the necessity of the office having a very high level of support from leadership to be successful.

Ms. Connell asked Ms. Wilson how her organization was able to get buy-in for adaptive use in her experience. Ms. Wilson responded that the CRO manages expectations and develops a robust communications plan to manage the discussion. The CROs hire experts to support them in having an imaginative, yet restrained conversation.

Mr. Thompson said that there have been visioning processes for comprehensive land use that the local government did not pay much attention to, since Hanford will not be fully closing for many decades. He said that the Tri-Cities Chamber of Commerce is looking into a visioning process currently that has buy-in from local government. He said that in his opinion, DOE does not reach out to Tribal governments as well as they could.

Ms. Howard added that dissention is part of the process and short and long-term goals must be managed for each party to be successful. She said that the local government needs communication from DOE to know how best to advocate and accelerate cleanup. She added that there is an opportunity for DOE to be more proactive and engaging with the governor's office in the state of Washington.

Ms. Wilson said that the end use is not up to the regulators, but the community and DOE. She said that a regulatory partnering process ensures progress on schedule.

Mr. White thanked the subcommittee for their insights.



The EMAB voted unanimously to promote the final report to Mr. White and EM leadership.

### **Discussion: End-State Contracting**

Ms. Johnson discussed the report recently submitted to Mr. White and EM leadership titled “Assessment of Human Resources to Implement the End State Contracting Approach.” She said that the recommendations in this report focus on facilitating a culture change that must take place to support EM’s commitment to the end-state contracting approach. The recommendations in the report suggest formalizing the launch of the approach with a communications plan. She said that this will clearly communicate the benefits of the approach which will garner support at all levels of the workforce.

Ms. Johnson said the report also recommended bolstering HR resources necessary to implement the end-state contracting successfully. She said this includes contract specialists and officers, as well as support resources for those positions. She said that the contracting workforce should feel as though these skills are beneficial to their overall career and goals.

Ms. Johnson said that the end-state contracting lessons learned at Hanford will be important for implementing this at other sites. She concluded that the EMAB is generally supportive of the end-state contracting model.

Ms. Johnson then introduced Mr. Aaron Deckard, EM CBC Acquisition Integration Lead and Senior Contract Specialist.

Mr. Deckard said that EM has made strides to shorten the pre-award procurement cycle time. He commented on the firm fixed price contracting model, noting that he agrees with utilizing this where it makes sense. He said that there is guidance from EM leadership and the Federal Acquisition Regulation to focus on this approach when possible. He also said that site characterization data is crucial for moving forward with this approach. He said that this is a preferred method within the end-state contracting approach.

Mr. Deckard noted that it can be a struggle to balance multiple competing contract types with the same contractor. He said that cost accounting can become a risk if the contractor does not have a robust system ensuring that the time is accounted for properly. Additionally, he said that this comes with added federal oversight. He recognized that there is also potential for competing incentives within the contract to focus on one aspect of the scope versus another.

Ms. Fitzgerald asked if there is a maximum term for a contract. Mr. Deckard responded that there are five-year limits on service contracts. He said it can go up to 10 years with sufficient justification. He added that the end-state contracting model is a 10-year ordering period with the ability to issue orders for an additional five years. He said that the term is typically a separate discussion from the contract type.

Ms. Howard asked if the end-state contracting approach has expanded or constricted contracting opportunities at Hanford so far. Ms. Johnson responded that the intent is to expand opportunities, but it is too early to judge the process at this juncture. Mr. Deckard added that it should offer opportunities for non-traditional EM contractors to be involved in the marketplace. Ms. Howard said in her perception, it seems to be constricting opportunities.

Ms. Johnson said that there should be more opportunities, after the prime contractors are in place, for those contractors to bring in other players for more specific scopes of work. Mr. Deckard agreed. He said that if a greater level of involvement is not achieved, that will be a lesson learned. He added that the end-state model is adaptable and agile when it comes to future technology development and changes in the marketplace over time.

Ms. Connell commented that EM appreciated this report and that leadership is taking a hard look at the need for resources. She asked Mr. Deckard if he had a chance to establish a program plan for the execution of this approach in the field. Mr. Deckard responded that internally it is a period of remarkable change. He said that many things in the report are things that EM has been working on, but may not have shared those strategies, while other things in the report will be taken under advisement.

Mr. Deckard said that in December 2018, EM released an explanation of the current version of the end-state contracting model. Ms. Johnson said that the subcommittee has not seen this document. She said that those who the subcommittee interviewed may not have seen this either. She suggested that a 4-5 page program plan would be sufficient to lay out the vision, strategy, roles and responsibilities, and communications. She said that this will be a communication tool to describe to the public why EM is using this approach. She said at the site level, there should be a more detailed site-specific plan.

Mr. Lockhart noted that through the subcommittee's interviews there seemed to be a lack of clarity on a formal plan. Mr. Deckard said that the document he referenced is available on the EM CBC website. He acknowledged that there could be more clarity and awareness of a program plan and its implementation.

Regarding the report, Mr. Deckard said that strategic plans are currently moving forward to identify which end-states to attempt by engaging with Tribes and stakeholders. He said that EM should take care to make lessons learned accessible across the complex. He said that he envisions a more structured partnering with contractors with end-state contracting. He said that the resources could be shared through an acquisition corps of subject matter experts that can be useful for multiple projects.

Ms. Wilson mentioned that she noticed some DoD parallels in this discussion. She noted that there is a difference between DoD and DOE milestones. DOE milestones are more long-term and DoD has a rolling milestone concept. She added that only near-term milestones are enforceable, and it seems that the end-state contracting approach facilitates more of a rolling milestone concept. Mr. Deckard said that from a project management perspective, the end-state contracting model allows for defined scopes and milestones to be executed.

## **EM Technology Development Presentation**

Office of Technology Development Director Mr. Kurt Gerdes discussed the potential new EMAB charge regarding EM's Technology Development (TD) efforts. He said that EM would like the EMAB to prioritize the recommendations made in the National Academy of Sciences (NAS) report ("Breakthrough Solutions and Technologies Needed to Speed Cleanup of U.S. Nuclear Weapons Sites", March 2019) to effectively utilize EM's resources. He said the EMAB should develop a draft management plan by spring 2020, to be finalized in summer 2020. The processes developed should help EM reduce cleanup lifecycle costs, schedules, risks, and uncertainties.

Mr. Gerdes said that EMAB member Mr. Jim Rispoli was on the NAS committee that compiled the report. He noted that Congress requested this report.

Mr. Gerdes then described the major recommendations of the NAS report.

Mr. Gerdes said that through NAS's site visits and research, they were looking for ideas that would have multi-site benefits. He reviewed the information that was given to the NAS, which includes the EM Innovation and Technology Plan and Technology Roadmaps for various areas (e.g. glass, mercury, robotics).

Mr. Gerdes listed the EM technology mission areas: liquid radioactive waste processing and disposition, soil and water cleanup, nuclear facility decommissioning, nuclear materials and spent nuclear fuel management, solid radioactive waste treatment and disposal, and science and technology.

Mr. Gerdes discussed the historical funding for TD, noting that it has significantly dwindled over time. He said that major companies allocate an average of 3% of their overall budget to R&D to keep innovating, while EM's current numbers are approximately 0.3%. In 2014, the Secretary of Energy Advisory Board recommended that EM fund their R&D at 3% to enhance the program.

Mr. Gerdes said that Paul Dabbar, the Under Secretary for Science, has encouraged collaboration between EM, the Office of Legacy Management, and the Office of Science.

Mr. Gerdes discussed the TD budget, noting that the test bed initiative has been a major focus in FY 19. He said that the EM has been conducting reviews of field-sponsored TD to fully understand all efforts and coordinate across the complex. He said that EM has also committed to joint projects with the United Kingdom related to TD.

Mr. Gerdes concluded by stating that the EMAB would be helpful in determining a management plan that would create a sustainable TD program.

Ms. Johnson asked if there is an analysis of the overall benefit of the dollars spent towards TD each year. Mr. Gerdes responded that there is more information on this coming soon, but currently there is not as much research on this as he would like. Ms. Johnson asked if the NAS

report gives any recommendations regarding funding. Mr. Gerdes responded that the report does not get into specific funding numbers.

Mr. Abelson asked for clarification on who exactly is developing the technology. Mr. Gerdes responded that EM works mostly with the labs to address EM's problems. He said that the site funding goes to both the labs and the contractors. He added that the Office of Science did a workshop for EM in recent years to do some basic research to help the mission.

Ms. Howard said it seems that studies have been done that need to be brought together. She said that EM funding is for cleanup of sites, so finding the top priorities of each site and determining how the labs or universities can help solve those problems would be one strategy. She added that it would be useful to look at practices of other countries. Mr. Gerdes said that there is not currently a robust international program, but Mr. White has a deep interest in leveraging international expertise. Ms. Howard said it is always important for the US to be at the table to help solve this global problem.

Ms. Connell said that the Secretary of Energy Advisory Board report gave a complete view of a robust technology development program, but those funding levels listed are unrealistic. She said that historically, as the cleanup became more mature and contractors needed to invest in more technology, the HQ funded amounts decreased. She said EM would like the EMAB to consider that the contractors are doing some level of TD and determine what investments would make sense given a more limited budget. She would like them to look for opportunities to leverage technology at a given site to be used across the complex.

She said that HQ has funded robotics TD in the recent past, but there became more of a need for contractors to use applied technologies in the field rather than funding robotics through HQ.

Mr. Craig said that it seems that the role of the advisory board is not to create a management plan, but to comment on a draft plan. Ms. Connell said that instead of a management plan, it could be a recommendation on a management approach. Mr. Gerdes said that HQ is already working on putting together a management plan.

Ms. Johnson said that there is not a large portion of the budget that is discretionary. She said that the EMAB may be able to provide recommendations on a rationale for science and technology in EM. Ms. Connell said that it should also include recommendations on what a reasonable amount of funding for the TD program. Ms. Johnson pointed out that this is not how the charge currently reads.

Ms. Howard said that the market should determine what the best technology would be and EM can help push it through however it makes sense. She said that EM should not limit themselves on what can be accomplished.

Mr. Thompson commented that DOE should be looking to the market and universities to produce a cost analysis based on what task are trying to accomplish. He discussed his concerns about DOE's use of the Consortium for Risk Evaluation with Stakeholder Participation (CRESP),

stating that DOE should diversify their researchers. He said that EM should collect all studies related to this topic in one place to provide neutral information before making decisions.

Mr. Lockhart asked how broadly EM might consider a technology. He commented that the NAS report discusses visualization and modeling which could also be powerful for engaging stakeholders and regulators and as tools to facilitate management issues. Mr. Gerdes said that EM is definitely open to using technologies like this across the board.

Ms. Fitzgerald said that EM's short-term and long-term goals could sometimes be competing. She said that the EMAB could examine the NAS report and help set priorities keeping the long-term goals, including community goals, in mind.

Ms. Johnson asked if there is an established criteria for how the funding is spent. Mr. Gerdes said that the specifics of the focus areas are still being worked through.

Ms. Connell said that CRESA was formed as an independent entity that would support the department that would not work with contractors. She said that the work that they do it partially risk reviews but also technical assessments. She said much of their work today is technical analyses of mercury at Oak Ridge and the Waste Treatment and Immobilization Plant at Hanford.

Mr. Abelson said that there is a difference between TD for the sake of problem solving for a more efficient cleanup and TD for the end states. He said the question of grouting at Hanford is based on the site's end state. He noted that technology is deployed for different reasons that the EMAB should be mindful of when taking up this charge.

Ms. Johnson asked for clarification on the exact charge. She said it seems that EMAB could recommend criteria for determining how to spend the funding. She added that Mr. White wants to manage the budget more corporately and maximize the use of funds embedded in the programs. Ms. Johnson said that it seems he would like to see how the money directly benefits the program, and this may be a good way to look at the charge in terms of priority setting. She said that she did not want to duplicate any work that the Savannah River National Laboratory (SRNL) would do. She said CRESA may be able to provide a better product than the EMAB. Mr. Craig and Ms. Connell agreed.

Ms. Connell said that EM would like feedback on the NAS report and determine how to best leverage work being done in the field across the complex. Mr. Gerdes said that Mr. White would like to see the return on investment, which would be helpful to show Congress and prove that EM is spending efficiently.

Mr. Jostes commented that instead of one contractor implementing a system, perhaps those systems could be purchased once and taken to other sites. Mr. Jostes said he believed this is an area the EMAB could analyze and see what breakthroughs could be shared at other sites. He asked if the EMAB is being asked to look into emerging technologies that might not currently be on the table. Ms. Connell responded no.

Ms. Johnson said that Mr. Gerdes's office has a full view of which technologies are at play and she doesn't want the EMAB to duplicate any work that they are doing. Mr. Jostes said that the EMAB could recommend that EM allocate funds to create a list of technologies created by EM contractors to avoid duplication of TD.

Ms. Howard said that the EMAB should be reviewing what has been recommended instead of coming up with new solutions. She said EM leadership is dealing directly with the sites and should tell the EMAB what their perception is and have them look at the big picture considering the NAS report as well. Ms. Connell agreed. She said that they need advice on what can realistically be implemented from the NAS report.

Ms. Howard said that if EM can prove successes in their TD investments in the short-term, one day they may get to 3% funding for TD and build a robust program as needed. Mr. Gerdes added that end-state contracting adds this incentive for contractors to utilize TD.

Mr. Craig suggested that the EMAB tweak the charge based on this discussion. Ms. Johnson said that the goal was to form a subcommittee during this meeting, but the charge needs more work. Mr. Craig volunteered to join the subcommittee along with Mr. Runyon, Ms. Howard, and Ms. Fitzgerald. Mr. Runyon asked if the subcommittee could receive the information used to create the NAS report and the timeline of when that information was released.

Ms. Johnson asked what the product would be from SRNL on program formation. Mr. Gerdes said they are meeting with them soon. He said they would be assisting with putting an approach on paper. Ms. Johnson said this may also be a piece to consider when forming the charge.

Mr. Borak said that the EMAB will take some time to rework the charge, send it back to EM management for approval, and then officially discuss formation of a subcommittee.

### **Public Comment Period**

There were no comments by members of the public.

### **Board Business**

Mr. Borak said asked the EMAB members if they had a preference on the location of the spring meeting. Mr. Abelson said that he believes the EMAB should meet in Washington, D.C. He said that going to sites does not always add the same value as being able to meet with EM leadership easily in D.C. Mr. Craig agreed.

Ms. Fitzgerald commented that last time the EMAB met at Oak Ridge, the mayor and local officials got to meet the EMAB. She noted that this dynamic would be missed, and advocated for an approach where one meeting is held in D.C. and one meeting is held at a site. Mr. Borak said historically this has been the approach, adding that for the new charge, a good place to meet could be SRNL.

Ms. Johnson said that the subcommittee meetings in Denver, CO this past summer were a great opportunity for the subcommittees to have face-time to pull together the final reports. She said they should consider holding in-person subcommittee meetings in the future. She added that Washington, D.C. should be the default location for the biannual meetings due to the proximity to EM leadership. Mr. Borak added that the subcommittee meeting could be held at SRNL.

Mr. Borak said that the EM Site-Specific Advisory Board (EM SSAB) Chairs have suggested a joint meeting with the EMAB. In 2020, they are meeting in Las Vegas and at Los Alamos National Laboratory. Mr. Borak said this would give the EMAB an idea of the work at the sites, but he ultimately does not find a joint meeting particularly beneficial to the EMAB's work. He said that he does update the EM SSAB Chairs on the EMAB's work. Ms. Connell said that they did meet jointly once before, but only for a short time, and then held their own separate sessions.

Mr. Lockhart said that collocating the EMAB meeting with the National Cleanup Workshop could be a good way to engage with the EM SSAB Chairs and EM leadership. Mr. Borak said that unfortunately it is very expensive to send the EM SSAB Chairs to the National Cleanup Workshop, so he does not typically encourage this. He said it would be more likely to have an EMAB-only meeting colocated with the National Cleanup Workshop.

Mr. Jostes said that if meeting jointly is beneficial to EM, the EMAB would be willing to oblige. Ms. Mary Kruger said that the EM SSAB and the EMAB have very different missions and it may not be the best thing for productivity of both groups.

Mr. Thompson suggested that an EM SSAB member attend the EMAB meetings and an EMAB member attend the EM SSAB Chairs meeting.

Mr. Leonard Spearman, Senior Advisor for EM, commented that it would be beneficial for the EMAB to hear the site perspective from the EM SSAB. He said visiting the sites has helped him fully understand the EM complex and he believes that the site-specific perspective would benefit the EMAB greatly.

Mr. Thompson said that most EMAB members have site-specific experience through their many EM experiences and each site perspective is represented in some way on the EMAB.

Mr. Abelson asked if the EM SSAB Chairs have an executive committee. Mr. Borak responded no. Mr. Lockhart said that EMAB members that live near a site should attend the local EM SSAB meetings and report any items of interest back to the EMAB.

Ms. Kruger clarified that the EMAB and EM SSAB have very different missions and charges and she does not want that to get blurred in a joint meeting.

Mr. Borak said that he would look into formalizing a process for the EM SSAB and EMAB to share information.

Ms. Connell introduced Mr. Todd Shrader, Principal Deputy Assistant Secretary for EM. He emphasized his appreciation for the EMAB and their expertise. Mr. Shrader said that he's observed EM's progress over the past couple of years, but the sense of urgency has been lost. He said that he would like to see EM refocus on the next site closure and recapture the sense of urgency.

Ms. Fitzgerald commented that she enjoyed Mr. Shrader's infrastructure presentation at the 2019 Intergovernmental Meeting and learned a lot.

Mr. Runyon asked if EM has determined their next priorities are. Mr. Shrader said that the East Tennessee Technology Park and Brookhaven National Laboratory Stack Demolition Project are nearing mission completion. He said that the priority for other sites is to ensure the right contracts are in place to keep the missions moving forward.

Mr. Abelson commented that in his experience at Rocky Flats, there seemed to be a rallying cry within DOE and Congress to cleanup these sites. He said this has been lost when looking at the large challenges at Hanford and Savannah River. Mr. Shrader said that Rocky Flats, Mound and Fernald had an advantage due to their proximity to major cities where DOE was not the main economic driver. He said that communities are afraid of losing jobs, and it is helpful to keep the post-site closure development in mind to garner support from the communities.

Mr. Thompson said that when members of Congress that are supportive and knowledgeable of the EM mission leave Congress, there will be a loss of funding. Mr. Shrader commented that funding follows success and it will be up to EM to showcase the successes and advocate for the program.

Ms. Wilson commented that unlike DOE, DoD does not have milestones that are 30+ years into the future. She said that they have enforceable milestones each year. She commented that more milestones does not lead to more funding.

Ms. Johnson thanked Mr. Shrader for his strong support of the EMAB.

Mr. Borak said that the EMAB does not have bylaws and he will be drafting some to give the Board more structure. Mr. Abelson commented that the EMAB meetings give a very important insight to the status of the EM program. He asked if there is a newsletter that may help keep the EMAB members up to date outside of their meetings. Mr. Borak responded that the EM Update Newsletter is available to anyone who is interested. The EM newsletter and press releases can be found at [www.energy.gov/em/em-news](http://www.energy.gov/em/em-news).

Ms. Johnson suggested that the EMAB should have monthly calls to tag up.

The meeting was adjourned at 3:30 PM ET.