

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

**PUBLIC MEETING MINUTES**

**Hilton Alexandria Mark Center  
5000 Seminary Road  
Alexandria VA 22311  
September 11, 2018**

## LIST OF ACRONYMS

CAB – Citizens Advisory Board  
CRESP – Consortium for Risk Evaluation with Stakeholder Participation  
DFO – Designated Federal Officer  
DDFO – Deputy Designated Federal Officer  
DOE – U.S. Department of Energy  
DNFSB – Defense Nuclear Facilities Safety Board  
D&D – Deactivation & Decommissioning  
ECOS – Environmental Council of the States  
EM – (DOE) Office of Environmental Management  
EMAB – Environmental Management Advisory Board  
EM SSAB – Environmental Management Site-Specific Advisory Board  
EPA – U.S. Environmental Protection Agency  
FACA – Federal Advisory Committee Act  
FY – Fiscal Year  
HAB – Hanford Advisory Board  
Hanford – (DOE) Hanford Site  
HQ – U.S. Department of Energy Headquarters, Washington, D.C.  
ICP CAB – Idaho Cleanup Project Citizens Advisory Board  
IWTU – Integrated Waste Treatment Unit, Idaho  
LANL – Los Alamos National Laboratory  
NEPA – National Environmental Policy Act  
NNMCAB – Northern New Mexico Citizens’ Advisory Board  
NNSA - National Nuclear Security Administration  
NSSAB – Nevada Site-Specific Advisory Board  
ORSSAB – Oak Ridge Site-Specific Advisory Board  
Paducah CAB – Paducah Citizens Advisory Board  
PORTS SSAB – Portsmouth Site-Specific Advisory Board  
Portsmouth – (DOE) Portsmouth Site  
SRS – (DOE) Savannah River Site  
SRS CAB – Savannah River Site Citizens Advisory Board  
TRU – Transuranic Waste  
WIPP – Waste Isolation Pilot Plant

## PARTICIPANTS

### Environmental Management Advisory Board Members:

Frazer Lockhart, Tracy Mustin, Josiah Pinkham, Lessie Price, Beverly Ramsey, Timothy Runyon, David Swindle Jr., Robert J. Thompson, Shelly Wilson, Kimberlee Kearfott, Jane Hedges

Members not present include Carolyn Huntoon and James A. Rispoli

Hanford Advisory Board: Susan Leckband, Chair; Shelley Cimon, Vice-Chair; James Lynch, DDFO; Kristen Holmes, Federal Coordinator

Idaho Cleanup Project Citizens Advisory Board: Keith Branter, Chair; Trilby McAfee, Vice-Chair; Jordan Davies, Staff

Nevada Site-Specific Advisory Board: Steven Rosenbaum, Chair; Frank Bonesteel, Vice-Chair; Barbara Ulmer, Staff

Northern New Mexico Citizens' Advisory Board: Gerard Martinez y Valencia, Chair; Stan Riveles, incoming Chair

Oak Ridge Site-Specific Advisory Board: Dennis Wilson, Chair; Belinda Price, Vice-Chair; Shelley Kimel, Staff

Paducah Citizens Advisory Board: Bill Murphy, Chair; Michael Kemp, Vice-Chair; Eric Roberts, Staff

Portsmouth Site-Specific Advisory Board: Bob Berry, Chair; Carlton Cave, co-Vice-Chair; Greg Simonton, Federal Coordinator

Savannah River Site Citizens Advisory Board: Gil Allensworth, Chair; Douglas Howard, Vice-Chair; Michael Mikolanis, co-DDFO; de'Lisa Carrico, Federal Coordinator; James Tanner, Staff

### DOE Participants:

Paul Dabbar, DOE Undersecretary for Science

Anne Marie White, Assistant Secretary for Environmental Management

Mark Gilbertson, Acting Principal Deputy Assistant Secretary, Office of Environmental Management

Shari Davenport, Acting Associate Principal Deputy Assistant Secretary for Corporate Services

Ken Picha, Acting Associate Principal Deputy Assistant Secretary for Field Operations

Michelle Sneed, Director, DOE Office of Secretarial Boards and Councils

Darren Bossie, Deputy Director, DOE Office of Secretarial Boards and Councils

Rob Seifert, DOE Office of Regulatory Compliance

Betsy Connell, DOE Office of Regulatory, Intergovernmental and Stakeholder Engagement

Joshua Jones, DOE Office of Management

Robert Boehlecke, DOE Nevada Program Manager

David Rhodes, EM Los Alamos, Office of Quality and Regulatory Compliance

James Malmo, EM Idaho, Assistant Manager for Waste Disposition

Jennifer McCloskey, EMAB Designated Federal Officer

David Borak, EM SSAB Designated Federal Officer

Jared Bierbach, Contractor Staff, Office of Intergovernmental and Stakeholder Programs

Alyssa Harris, Contractor Staff, Office of Intergovernmental and Stakeholder Programs

## MEETING MINUTES

The U.S. Department of Energy's (DOE) Office of Environmental Management (EM) Advisory Board (SSAB) and Environmental Management Advisory Board (EMAB) met on September 11, 2018, at the Hilton Alexandria Mark Center in Alexandria, VA. This was the first time the two EM advisory boards met jointly. Members of both boards were participating the EM Cleanup Workshop, which followed this meeting. Participants included EM SSAB officers and members, Environmental Management Advisory Board members, DOE staff, EM SSAB Deputy Designated Federal Officers (DDFOs), Federal Coordinators 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**

Mr. David Borak, EM SSAB Designated Federal Officer (DFO) called the meeting to order at 8:30 a.m. ET. He welcomed meeting attendees to the D.C. area, and invited those interested to visit the 9/11 Memorial at the Pentagon, given that this meeting was held on September, 11.

Mr. Borak and Ms. Jennifer McCloskey, EMAB DFO, noted that the morning sessions included program updates from EM leadership to both the EM SSAB and EMAB members. Following lunch, the EMAB and the EM SSAB would hold separate meetings. Ms. McCloskey added that both meetings will have a public comment period. She also introduced Ms. Michelle Sneed and Mr. Darren Bossie of the Office of Secretarial Boards and Councils.

The EMAB and EM SSAB members introduced themselves. Mr. Eric Roberts, the meeting facilitator, reviewed logistics for the day.

### **Remarks by DOE Undersecretary for Science, Mr. Paul Dabbar**

Mr. David Swindle, EMAB Chair, introduced DOE Undersecretary for Science Mr. Paul Dabbar, who is also a former EMAB member.

Mr. Dabbar opened his remarks by thanking the EMAB and EM SSAB members for coming together in this forum. He emphasized America's great successes in the energy security and innovation realms. He mentioned the National Laboratories' contributions to national defense in recent years. He commended Oak Ridge National Laboratory for commissioning the world's fastest supercomputer and the world's strongest artificial intelligence machine. Mr. Dabbar championed the U.S. as a leader in physics.

Mr. Dabbar reviewed EM projects that have made significant progress, such as cleanup of the final reactor along the Columbia River corridor, the potential closure of the tank farm at Hanford, the demolition of the vitrification facility at West Valley, and the build of the ventilation system at the Waste Isolation Pilot Plant (WIPP). In addition, he mentioned the successful continuation of operations at the Integrated Waste Treatment Unit (IWTU) in Idaho and salt waste disposal at the Savannah River Site (SRS). He stressed the importance of looking at EM's successes and lessons learned to help with future projects.

Mr. Dabbar stated that with a well-supported budget comes a great obligation to produce results. He said that it is not only EM's responsibility to the communities, but also to the taxpayers. He discussed encouraging contractors to be innovative with their solutions to risk reduction and cost containment.

Mr. Dabbar said that Portsmouth was recently able to transfer a significant amount of land back to the local community. In addition, he said that when possible, EM would like to return land to local Tribes, which is an important issue to him.

He discussed the reduced emissions at various sites and DOE's market-leading research in batteries, solar cells, and commercial nuclear power. He discussed the tremendous amount of research happening at the labs, and how these local communities have the opportunity to drive EM's mission forward with new technologies near EM's sites.

Mr. Dabbar told the advisory boards that DOE values their input. He encouraged them to keep focused on providing their maximum value as a board.

Mr. Gerard Martinez y Valencia, Chair of the Northern New Mexico Citizens Advisory Board (NNMCAB), asked if the current administration could potentially do away with citizen input such as FACA boards. Mr. Dabbar responded that he does not know of any expectation to eliminate FACA boards and said that he is at this meeting to support and listen to these boards. Mr. Martinez y Valencia thanked Mr. Dabbar for being at the meeting, and said that it would be helpful for the EM SSAB and citizens to be even more involved in the many changes being considered in EM, such as DOE Order 140.1, Interface with the Defense Nuclear Facilities Safety Board (DNFSB). Mr. Dabbar said that more citizen input is something that DOE is interested in having.

Mr. Swindle asked Mr. Dabbar to comment on EM's efforts to cooperate and interact with other countries that can benefit from the advancement of EM's research. Mr. Dabbar responded yes, there are a number of bilateral discussions with countries such as Japan and France.

Ms. Susan Leckband, Chair of the Hanford Advisory Board (HAB), asked Mr. Dabbar to elaborate on the balance between adequate cleanup and speedy cleanup. Mr. Dabbar responded that as someone who operated a facility, he understands that risk reduction comes first. He said that most of the time being on time and budget is part of the primary goal of risk reduction.

Mr. Doug Howard, Vice-Chair of the Savannah River Site Citizens Advisory Board (SRS CAB) asked how often the President is briefed on environmental cleanup. Mr. Dabbar said that at cabinet meetings, DOE issues are discussed and periodically this will include environmental cleanup, approximately once every couple weeks.

Mr. Swindle thanked Mr. Dabbar for his continued service and for meeting with the boards.

Mr. Dabbar presented plaques to Ms. Lessie Price and Mr. David Swindle for their service to the boards. Both members retired from EMAB.

## EM Budget Update

Ms. Shari Davenport, Acting Associate Principal Deputy Assistant Secretary for Corporate Services, provided a snapshot of how the Fiscal Year (FY) 2019 budget is distributed across the sites, noting that changes will be made based on congressional intent of funding. She said that the level of funding is similar to last year's high level of support. She also said that the budget process is moving very quickly this year.

Ms. Davenport expected the FY 2019 Appropriations Bill to be finalized by the following Friday. In FY 2018, EM received \$7.1 billion in funding, \$300 million of which was directed towards excess facilities, predominantly Oak Ridge National Laboratory, Lawrence Livermore National Laboratory, Lawrence Berkeley National Laboratory, and Idaho National Laboratory. She added that there was also a continued focus on increasing operations at WIPP. Each site saw some level of increase in FY 2018, across the board.

Ms. Davenport said that Ms. Anne White, Assistant Secretary for EM, is focused on challenging the sites and contractors to make every dollar count. While EM is receiving a tremendous amount of support, we have a responsibility to be as efficient as possible with those dollars.

Ms. Davenport mentioned some large operational efforts on the horizon, such as salt waste processing at SRS and low-activity waste at Hanford. She said that Ms. White is looking at the big picture and making sure EM is managing funding requirements efficiently.

Ms. Davenport discussed the House and Senate budget marks on the FY 2019 request. She said that the Senate upheld a commitment to excess facilities. By and large, the FY 2019 bill looks very similar to FY 2018, which will allow the sites to continue the level of operation that is already underway.

Ms. Davenport gave some insight to how the FY 2019 budget is expected to execute. She said that Brookhaven National Laboratory saw Senate support and will be focusing on stack demolition in 2019, due to an increase of \$20 million. For WIPP, the House and Senate supported increasing transuranic waste (TRU) shipment rates and the ventilation system. The Energy Technology Engineering Center would see a small bump to continue efforts. Idaho will focus on IWTU, TRU waste, and maintaining spent nuclear fuel storage. Los Alamos National Laboratory (LANL) was well supported by the Senate and Moab will also see an increase.

If an increase in funding is not sustainable, it can lead to inefficient efforts, adding that there will be a dialogue at Moab for what can be executed realistically. She said that Nevada will have consistent funding, Oak Ridge has increased support from both the House and the Senate, Paducah will see level funding for C-400 and the Depleted Uranium Hexafluoride Conversion Facility (DUF-6) facility, and Portsmouth will see an increase for deactivation and decommissioning (D&D) activities. She also said that the Office of River Protection will focus on more tank operations, and Richland will steadily continue activities.

Ms. Davenport said that SRS received less funding than requested, which will cause a slowdown in the Salt Disposal Units 8 and 9 and the Liquid Waste Program; however, the proposed FY 2019 funding is still at an acceptable level.

Ms. Davenport emphasized EM's focus on efficient execution and opened the floor for questions.

### Discussion

Mr. Gil Allensworth, Chair of the SRS CAB, commented that Savannah River's community is very frustrated with the cuts to the Liquid Waste Program and any potential slowdown at SRS. He asked what DOE is doing to help SRS get the proper funding. He added that it can be hard to hear the excitement for a high level of funding across the board, when SRS is not receiving what they need. He said that there are milestones that SRS needs to achieve to avoid state fines, which further increases the financial burden.

Ms. Davenport responded that the budget that is sent by EM clearly presents the support for SRS and their programs. Negotiations then happen within Congress between the House and the Senate. Mr. Mark Gilbertson, Associate Principal Deputy Assistant Secretary for Regulatory & Policy Affairs, said that while EM asked for over \$100 million for SRS, because they believe it is important, they were unsuccessful in getting the House and the Senate to support it. He said EM will need to consider how to better emphasize this importance and get support from the site to communicate this to the Hill.

Ms. Shelly Wilson, who represents the South Carolina Department of Health and Environmental Control on EMAB, commented that she appreciates the high FY 2019 budget request for SRS, and noted that this is the first time in many years that there has been a hardy request for SRS from DOE. She echoed Mr. Allensworth's concerns about the level of funding the site will ultimately receive in FY 2019, mentioning the pension issues at SRS and the strong desire to close the tank farm. Mr. Gilbertson responded that EM is examining the pension issue.

Mr. Howard asked for clarification on the disagreements between the House and the Senate. Ms. Davenport said that she can only speak to what she can see, but they ended up meeting in the middle in the final enacted.

Mr. Allensworth asked if dollars were potentially allocated to a site other than SRS that Congress thinks needs funding more than they do. Mr. Robert Thompson of EMAB explained that it is political, and Savannah River's delegation is not strong enough compared to the other delegations.

Ms. Shelley Cimon, Vice-Chair of the HAB, commented that the budget did not separate infrastructure from actual cleanup costs. She added that this can paint a different picture from reality. Ms. Davenport said that while they want to show transparency, they are also concerned about control points that occur by having separate requests.

Ms. Belinda Price of the Oak Ridge Site-Specific Advisory Board (ORSSAB), commented that it is regrettable that federal employees may not receive a raise this year, and asked if this affects the budget. Ms. Davenport responded that DOE does not make this decision, and that this has already been taken into account.

Ms. Leckband said that the HAB provides budget priorities to their local EM office, and asked how that information is communicated from the sites to EM Headquarters (HQ), and what happens after that. Ms. Davenport responded that the dialogue happening at site level with EM Field Managers is factored into the initial recommendations within the development of EM's budget request.

### **EM Field Operations Update**

Acting Associate Principal Deputy Assistant Secretary of Field Operations Mr. Ken Picha began by recognizing the success that EM has seen over the past 29 years, as well as the work ahead. He emphasized EM's focus on risk reduction at the sites in a way that is cost-effective to taxpayers. He listed major successes in the field related to tank waste, construction projects, D&D, and special nuclear materials including spent nuclear fuel. He said that safety requires vigilance; all field managers report to HQ on a periodic basis. He said that EM is focused on protection of the environment, the public, and the workforce.

Mr. Picha reviewed major accomplishments in the field which include the receipt of WIPP's twelve-thousandth shipment, beginning operations at the new on-site disposal facility at SRS, and breaking ground at the mercury treatment facility at Oak Ridge. Additionally, he discussed the cleanup of vertical pipe units at Hanford, and the use of robotics to remotely repair a leak in an evaporator at SRS.

Mr. Picha said that the vitrification facility at West Valley is set to complete cleanup in FY 2018. He showed a photo of the cleanup progress happening at the Separations Process Research Unit in the Atomic Power Laboratory in New York, noting that it is successful so far. He also noted that cleanup of the East Tennessee Technology Corridor and Y-12 at Oak Ridge are both on schedule.

Mr. Picha then discussed progress at SRS. The K Reactors' sludge removal progress is well underway. He said that High-Flux Test Reactor spent nuclear fuel has begun processing, along with cored from H-Canyon. He mentioned the challenge of keeping H-Canyon facilities up to modern safety standards 60 years after it was developed.

Regarding groundwater cleanup, Mr. Picha said that the Hanford 200 West groundwater treatment system has been very successful, and a strategy is being developed to handle the chromium plume at LANL.

Mr. Picha then discussed the challenges facing the complex, such as finding replacement parts for aging, one-of-a-kind facilities. He said that the U.S. frequently uses foreign vendors for components that meet the Nuclear Quality Assurance Standard, which has been a challenge due to the lack of U.S. vendors.



### Discussion

Ms. Cimon asked how the latest tariffs might adversely impact the procurement of materials that the U.S. needs from international markets. Mr. Picha said that he would be unable to quantify the impact, but that there will be an impact due to the tariffs on steel and aluminum.

Ms. Leckband asked if DOE is partnering with U.S. vendors to reduce the dependency on foreign markets. Mr. Picha said that while he is not aware of a specific mechanism, but he knows that the National Nuclear Security Administration (NNSA) is looking into the issue.

Mr. Swindle asked if EM periodically looks at accelerating funds for aging facilities to reduce the life-cycle costs. Mr. Picha responded that the Assistant Secretary wants to focus on opportunities to accelerate this program and determine investments in areas like this. He noted that Mr. Dabbar also has an interest in this topic.

Ms. Leckband asked if the sheer volume of waste in EM is a challenge worth discussing and suggested adding it to his presentation. Mr. Picha said that while he did not have the exact numbers at the moment, he ought to note the complexity and magnitude of the problem.

Mr. Stan Riveles, incoming Chair of the NNM CAB, asked if Mr. Picha could share some observations on the DNFSB in the field. Mr. Picha said that the DNFSB is not active at all of the defense sites, but they meet periodically with the site managers and subgroups. He said that he would categorize the relationship as a good one. Mr. Riveles asked if he anticipates any change from the new provisions of DOE Order 140.1. Mr. Picha said that in discussions thus far, there have not been differences in day-to-day interactions.

Dr. Bill Murphy, Chair of the Paducah CAB, commented that low natural gas prices will put electric utility nuclear reactors in a bind, and asked if DOE keeps track of the utilities cost and if it will cause any of their nuclear reactors to close early. Mr. Picha said that in terms of EM, he does not have an answer, but the Department does have many offices that are aware of and deal with this issue.

Mr. Martinez y Valencia asked what DOE's plan is for commercial industry disposal. Mr. Picha said that the Assistant Secretary comes from a commercial background and is ensuring that EM is leveraging the capabilities of commercial disposal sites. Mr. Gilbertson noted that DOE has a very good idea of the volume of both federal and commercial spent nuclear fuel. He also noted that commercial sites are highly regulated by the Nuclear Regulatory Commission.

### **EM Regulatory and Policy Affairs Update**

Mr. Gilbertson reviewed key priorities of the EM program, including a drive towards completion and regulatory reform opportunities. He encouraged attendees to engage with their sites regarding the regulation of low-level waste disposal. He discussed the WIPP operations and transportation program as high priorities. He also addressed the challenge that excess facilities present.

Mr. Gilbertson discussed the streamlining of the National Environmental Policy Act (NEPA) compliance program, and the push to reform metrics for NEPA documents. He also mentioned end-state contracting as a priority of the Assistant Secretary. He said that the reinterpretation of high-level radioactive waste is a work-in-progress, and EM looks forward to hearing input today and in the future; the Energy Communities Alliance did a great job laying out the potential opportunity that exists in this realm.

Mr. Gilbertson said that EM is engaging with the U.S. Environmental Protection Agency (EPA) on reworking the Superfund process, noting that they are exploring the issues related to federal facilities. EM is also continuing its partnership with the Nuclear Regulatory Commission and building on their experience at SRS and Hanford.

Mr. Swindle asked if there is a team being assembled in EM to head the reinterpretation of waste issue. Mr. Gilbertson responded yes.

Ms. Leckband asked if the Test Bed Initiative at Hanford has funding support for expansion. Mr. Gilbertson said that it will depend on the budget process. EM has briefed the Hill on its strategies. Congress has also asked EM to work through alternatives for disposition of Greater-than-Class-C waste materials in the commercial sector.

Mr. Gilbertson addressed WIPP's challenges, such as bringing the new ventilation system online, mining salt to improve access in different areas of the mine, and working through a permitting strategy for the potential radium tank waste to clarify the volume of record. Mr. Gilbertson said that WIPP has successfully dispositioned the above-ground materials that were being stored at Waste Control Specialists for monitoring. He said that they are evaluating alternatives to disposition the remaining containers from LANL. He explained that by diluting the drums, they are able to transport them, and they are determining the most cost-effective way to do so.

Ms. Cimon asked how many drums Mr. Gilbertson was referring to. He responded that there are less than 100 drums of concern. He said that EM is working closely with regulators to disposition these materials.

Mr. Gilbertson highlighted the successes of the waste transportation system, as well as infrastructure. He said that Congress has appropriated additional funds to Lawrence Livermore National Laboratory and other facilities' D&D projects.

### Discussion

Ms. Wilson asked if EM has considered making small exemptions to high-level radioactive waste rather than reworking the entire definition of waste. Mr. Gilbertson said that the present course is to look at the definition as a whole, but they are open to suggestions.

Mr. Swindle asked what the WIPP volume of record means for waste disposal capacity. Mr. Gilbertson said that the reality is that more capacity will be needed for future materials.

Mr. Swindle asked if the plutonium at SRS could be diluted as an option. Mr. Gilbertson responded that options have been considered and the current schedule may not be a final decision, but they are being respectful of milestones and deadlines.

Mr. Frazer Lockhart of EMAB asked if there have been any dialogues started between other programs looking to D&D using EM workforce. Mr. Gilbertson said that they are exploring with the Office of Science and NNSA what the most cost-effective options are for the taxpayer.

Mr. Timothy Runyon of EMAB asked if a cost benefit analysis had been conducted for the definition change and what facilities would be impacted by the change. Mr. Gilbertson said that getting to the exact numbers is very hard because there are many variables based on where the waste would finally end up, but he noted that there is significant savings potential. He said that where the waste would go is still being considered.

Mr. Martinez y Valencia commented that the disposal increases impact infrastructure. He encouraged Mr. Gilbertson to include citizen input on a larger scale.

Mr. Riveles asked what methodologies EM uses to determine risk and reward. Mr. Gilbertson said that they work in a regulatory framework, which provides ways to determine environmental risks. He said that the sites develop a framework to analyze risks and cost, which is then balanced at the HQ level. Mr. Riveles asked if potential liability is measured in numbers. Mr. Gilbertson said that the liability is calculated and reported annually.

Dr. Murphy commented that Bill Gates and others are planning to build a nuclear reactor that would use depleted uranium, and asked if DOE is working with them to turn a liability into an asset. Mr. Gilbertson said that Mr. Dabbar is interested in exploring options within the laboratories and working with outside entities. He cited examples of reuse of materials, such as SRS recycling disposition materials to benefit the community. He noted that EM is looking for these opportunities all the time.

### **Remarks by Assistant Secretary for EM, Ms. Anne Marie White**

Ms. White thanked the EMAB and EM SSAB members for coming together in a joint session. She said that the Field Managers meeting was going well, with great facilitators and positive energy.

Ms. White expressed her commitment to regulatory reform, which has the potential to create tremendous opportunities for EM. She said that regulatory reform is a major initiative of the administration, and is very important to her. She discussed priorities in this realm, including contract reform and reduction of taxpayer liability.

Ms. White said that she was excited to have a conversation with both boards and opened the floor for questions.

Ms. Leckband stated her concerns about reclassification of waste potentially leading to stove piping decision-making. Ms. White responded that she understands her concern and that she will

ensure that through comprehensive, sound decision making, EM will evaluate the totality of the situation and will look for public input. She said that she looks forward to conversations about how to reduce risk and liability of this issue.

Ms. Belinda Price commented that the Oak Ridge community is concerned with the push towards low-cost contracting mechanisms and how it disadvantages small businesses. Ms. White said that she was a small business owner herself, and she sees unique opportunities for small businesses with end-state contracting. She said that she has met with some small businesses that are members of the Energy Facility Contractors Group regarding these issues and came up with actionable solutions.

Mr. Thompson addressed the high volume of liquid waste at Hanford and asked if there is anything that can be done to help get more funding from Congress next time. Ms. White responded that she is also frustrated, and is committed to educating about the objectives of the site.

Mr. Riveles said that there has been push-back on the changes to DOE Order 140.1 and the New Mexico senators have asked for it to be reconsidered due to lack of public comment and public notice. Ms. White responded that she has not looked very closely at this yet, but there are three hearings that are opportunities for the public to provide input. She said that safety is always a priority. Mr. Riveles commented that he is curious what the issue is with the DNFSB and hopes there will be an opportunity for education.

Mr. Allensworth said that the SRS community is concerned about becoming an interim disposition area without a permanent solution. Ms. White responded that EM is working hard on the tank waste disposition and producing site strategic plans. She added that this will take stakeholder engagement and support before they are able to disposition any of it. Mr. Allensworth said that the SRS CAB has passed a resolution stating that they support this effort.

Ms. Cimon commented that the HAB is concerned about a shift in emphasis from risk to closure, which can affect safety. Ms. White said that environmental risk drives taxpayer liability, which is a major focus. She said that this goes hand-in-hand with cost-effectiveness because both are based on how quickly cleanup occurs.

Mr. Michael Kemp, Vice-Chair of the Paducah CAB, commented that he is discomforted by the lack of cooperation between DOE and EPA. Ms. White said that the DOE-EPA-States Dialogue has been a successful way to discuss their respective opportunities and challenges twice per year.

Mr. Howard asked Ms. White what she thinks are the pros and cons of the contracting side and governmental side of cleanup. Ms. White responded that as a contractor, there is room for innovation and agility, while the government is able to make big policy decisions.

Ms. Beverly Ramsey of EMAB asked if there is a plan to display an EM organization chart on the EM website to help with communication. Ms. White responded yes.

Mr. Runyon asked if there is any focused stakeholder engagement planned to help the public understand the changes surrounding the reinterpretation of waste. Ms. White responded that there is not a specific plan until implementation is considered, but a plan would be developed in the future. She added that stakeholder outreach will play a large role in this plan.

Ms. White thanked Mr. David Swindle and Ms. Lessie Price for their service to the Board.

At this time, the EMAB and EM SSAB continued their meetings in separate rooms.

### **EMAB Public Meeting**

Mr. Swindle called the EMAB session of the Fall 2018 meeting to order at 1:13 p.m. He welcomed the members, DOE staff, and Assistant Secretary White. Mr. Swindle said he thought the morning's combined session with the EM SSAB Chairs went very well and he recommended continuing with that precedent. He reminded the Board that they last met on May 16th, 2018, in DC at DOE HQ. Mr. Swindle noted for the record that the meeting would be conducted in accordance with the Federal Advisory Committees Act (FACA). After reviewing several FACA requirements and taking Board attendance Mr. Swindle asked for a moment of silence to acknowledge the 17th anniversary of the September 11th terrorist attacks.

### **Consortium for Risk Evaluation with Stakeholder Participation (CRESP) Hanford Risk Review Discussion**

Mr. Swindle then turned over the conversation to Dr. Beverly Ramsey, who heads the EMAB subcommittee examining the CRESP Hanford Risk Review. Dr. Ramsey introduced Dr. David Kosson of Vanderbilt University who serves as the principal investigator for the CRESP report. Dr. Kosson went over the guidance they received from former Deputy Undersecretary David Klaus who commissioned the report.

Dr. Kosson explained that CRESP was asked to identify and characterize potential risk and impacts to the public, workers and the environment, in addition to crafting guidance on the efficient use of EM resources. He described the investigation and the report as multi-faceted and noted that the report catalogued the different hazards and risks associated with the Hanford site.

Dr. Kosson elaborated on the process of crafting the report, and detailed the makeup of the advisory standing committee, including which stakeholders were represented. Among them were the EPA, DOE-Richland, DOE Office of River Protection, and the Washington Departments of Ecology and Health. In addition, multiple briefings were given to the Hanford Advisory Board, tribes and other local stakeholder groups. The final report was recently released as a public document and is now available to read at [www.cresp.org/hanford](http://www.cresp.org/hanford).

Dr. Kosson went further into the metrics and methodology used in developing this report. He said the researchers focused on geographical co-location because the receptors were all co-located and multiple sources potentially could impact the same types of resources.

He said that the committee researched different temporal evaluation periods and tried to understand what could happen now, in a hundred years from now and other such periods, in part to understand what current hazards and risks are, and what potential changes in risks may occur if remediation of specific areas was delayed.

Dr. Kosson said that there are no imminent threats to the public off site and members of the public who are located off-site. He went into other factors that could increase risk, like timing of the cleanup, worker availability, and worker training and continuity.

He discussed how “major events” such as seismic activity, or a major ash fall could have cross-site impacts. Dr. Kosson noted that the ecological resources at Hanford have been very important for the whole eco-region. He said that because Hanford has been a protected site that’s been closed to the public, it contains some habitat that’s been effectively protected and maintained from development.

Dr. Kosson reviewed some of the cultural and historical significance that the site has, particularly to tribal nations that surround Hanford. In the course of its review, CRESF met with the Tribes, which positively impacted the report.

Dr. Kosson concluded his presentation by going over some specific observations from the report that his team came up with. He said that EM must address the threats posed by the tank waste. He outlined two types of threats, one dealing with the risks posed by hydrogen gas, and the other being the threat of persistent and mobile groundwater contaminants.

He encouraged a reduction in the dependence on active controls, because should a major regional event occur he said that it was those controls which would be at risk. He asked that EM consider interim actions to reduce or eliminate sources that could cause substantial risk to human health or resources if a major regional event were to occur.

Lastly, he said that EM needs to continue reducing groundwater threats through focusing on how to do it most efficiently, one example being containment of groundwater plumes to prevent further spread.

Dr. Ramsey then opened the floor for questions for Dr. Kosson.

Mr. Tim Runyon asked whether CRESF looked at other studies or publications in the course of developing its report, or if the report was an independent process. Dr. Kosson replied that they did indeed look at and rely upon information developed in other reports and studies. He noted that they went through hundreds of thousands of pages of documentation.

### **EMAB CRESF Subcommittee Interim Report**

Dr. Ramsey recognized the members of EMAB’s CRESF Subcommittee and reported on the status of the subcommittee’s work.

Dr. Ramsey reviewed the charge to the Board to conduct an analysis of the Hanford Risk Review report and noted the depth, and comprehensive quality of the report. She said that a major component of the charge was to uncover what could be actionable and what EM could take and use for the purpose of meeting the objective of minimizing risk overall and also finding monetary savings throughout the process.

Dr. Ramsey said that in addition to the CRESP report, the subcommittee has also reviewed what other stakeholders like the HAB and the Washington Department of Ecology have had to say about the report.

The final outcome of the subcommittee's work will be to produce a report and recommendation(s) for EMAB to consider and potentially submit to the Assistant Secretary as a formal Board product. The goal of the subcommittee's report is to provide EM with recommendations on how best to implement the findings of the CRESP report.

Dr. Ramsey provided Assistant Secretary White with a read out of the subcommittee's progress. She noted that the members have reviewed every document they could get their hands on. Given the subcommittee's technical prowess, she feels fairly comfortable that they could provide sound advice to EM.

Dr. Ramsey said that there is adequate evidence of the credibility of CRESP's analysis and that the catalogue of risks and impacts are appropriate and supported.

She said that there are some weaknesses with respect to the ongoing and remaining risks associated with the cleanup being defensible and appropriate. She noted particularly the topic of ecological resources including groundwater issues.

Dr. Ramsey said they had some of their expert colleagues outside of EMAB review and provide feedback on the Hanford Risk Review's cultural resources section.

She said that she believes the recommendations within CRESP's report are technically supported by and large. Dr. Ramsey noted that Dr. Kosson would be joining the subcommittee the next day during their working session.

Dr. Ramsey said she thinks that EM needs to be really transparent with their stakeholders and make commitments to action.

Dr. Ramsey then outlined the schedule of action the subcommittee would take in producing their final report for the Assistant Secretary. She said that the intent was to get a draft report from the subcommittee back to EMAB sometime October and have the report voted on by the Board in November at a public meeting.

Mr. Swindle asked Assistant Secretary White if this plan was amenable to her. She said that it was. She said that it looks like the subcommittee has done and is doing exactly what she had asked of them. Assistant Secretary White thanked the members for their hard work. She said

that she looks forward to giving the report a thoughtful review, and noted that it will be useful for her plans to accelerate risk reduction not only at Hanford but complex wide.

Mr. Runyon said that one of his concerns was how the CRESP report dovetails with the existing Tri-Party Agreement at Hanford as well as any other regulatory statutes that would already be in place.

Dr. Kosson responded that their tasking at the time was not to wander into that territory.

Mr. Thompson brought up some of the comments put forth by the Washington and Oregon governors, the HAB, and the Washington State Attorney General.

Mr. Thompson said that there is some confusion in the community about the two reports. Mr. Thompson asked of the subcommittee members to share the recommendations they were considering. Dr. Ramsey said they were not yet done with their work.

Mr. Swindle stated that it was important to advise EM on how to put this report to use.

Ms. Mustin suggested that the subcommittee take up what might conflict between the recommendations and existing regulatory framework and action.

Mr. Swindle summarized this discussion and suggested the subcommittee to address how best to utilize this body of work not only to meet the needs of the DOE in setting its priorities, but also to gain the trust and confidence of the stakeholders beyond the Department.

### **Regulatory Reform Recommendation Discussion**

Ms. Shelly Wilson of EMAB's Regulatory Reform Subcommittee presented a draft recommendation for the full Board's consideration. She thanked everyone who contributed to the creation of the recommendation. In addition to the contributions of the subcommittee members, she also acknowledged the help received from DOE and EPA officials in providing input to the recommendation. She then introduced two EPA officials in the room, Mr. Greg Gervais and Ms. Monica McEaddy.

During EMAB's last meeting in May of 2018, Assistant Secretary White asked EMAB to provide recommendations on regulatory reform and a pilot partnering agreement between DOE and EPA. DOE and EPA are both Federal agencies with facilities, both interested in cleanup, and both want better, faster cleanup that has regulatory and community support with reduced burden to the taxpayer.

Ms. Wilson noted the ongoing National Dialogue between DOE, EPA, and the States, which is facilitated by the Environmental Council of the States (ECOS). She spoke about the advantages that EPA brings to the table and how they are the common denominator with regard to the Tri-Party Agreement at Hanford.



Ms. Wilson said that the subcommittee came up with two main ideas from their research; a partnering agreement pilot at Hanford, and a community visioning pilot also at Hanford.

Ms. Wilson cited the Charleston Naval Complex in South Carolina as a good example of a partnering pilot done well. She spoke about the fixed price contract that existed with the contractor which allowed cleanup to accelerate from 2000-2003. She said that the only way this was able to happen was thanks to all the time and energy spent in partnering with the regulatory agencies involved.

She said that in preparing the report the subcommittee worked with Paul Leonard and Greg Gervais from EPA; Betsy Connell, Rob Seifert, and Alexandra Gilliland, from EM; and Carolyn Hanson from ECOS.

Ms. Wilson went over several benefits and values of using partnering in cleanup and cleanup decision making. She noted how it can allow real-time consensus decisions which allow for greater expeditiousness. She said that partnering offers a more structured way to facilitate the consensus building process, help eliminate disputes, and provide assistance if a team reaches a difficult point.

Ms. Wilson discussed the prospect of the pilot at Hanford and said that the parties involved were all willing to participate in a partnering project. She said that in addition to the willingness another tool on the table at Hanford is the draft model partnering agreement which came out as a product of the National Dialogue. She also said that the experience and depth at EPA is another tool that can be used at Hanford for the pilot.

Ms. Wilson said that the subcommittee discussed what the partnering pilot could do at Hanford and came up with several ideas. The pilot could address the acquisition of the future Central Plateau cleanup contract, work in the 200 area, closure of the C tank farm, and permitting of the small-scale tank treatment unit.

She encouraged EM to formally reach out to EPA and the Washington State Department of Ecology to understand their willingness to participate in a partnering agreement and set up some meetings to figure out what the terms would be. Ms. Wilson asked Mr. Gervais if he had anything to add.

Mr. Gervais said that partnering isn't the only tool to use but that it can be very useful, he also noted that the agreement would not replace the Tri-Party agreement. Mr. Gervais said that partnering allows for a refinement of how things are done and enables the parties to find success together. This model helps normalize communications and builds rapport and an ability to routinely communicate with each other.

Ms. Betsy Connell asked Ms. Wilson to elaborate some more on the role of the facilitator in this idea. Ms. Wilson said that in her experience the facilitator has been instrumental in finding success with this work. The facilitator helps to take personalities off the table and coach individuals to success. She noted that sometimes teams have graduated from using a facilitator but having that role especially in the beginning is crucial for finding success.

Mr. Gervais added that in addition to the facilitator another methodology they've used with their U.S. Department of Defense counterparts is tiered partnering. He described the process of tiered partnering which includes the fundamental working project team, first line supervisors and middle management and also senior management. He said this approach helps with resolving disagreements as you have the option to elevate the concerns to two higher levels.

Mr. Gilbertson said that he was familiar with this sort of approach. In order for the Assistant Secretary to fully consider this, the subcommittee needs to provide greater detail and vision for what a teaming/partnering agreement might be with a 2.2-billion-dollar program like Hanford.

Ms. Wilson then discussed the community visioning project idea. The Regulatory Reform Subcommittee observed that several of the Superfund Task Force Recommendations related to community training, assistance, and visioning for alignment of end state cleanup goals. She said that EPA also has a lot of experience with this concept and that community visioning encompasses site cleanup and end use. EPA has lots of experts in the areas of facilitation, mediation, social equity and public outreach. She described the process of what they do when they go to a site, and noted that the relative cost of performing such an endeavor is quite small.

Ms. Wilson said that the subcommittee was recommending that DOE consider either the partnering pilot or community visioning as both strategies will be useful at Hanford where resources are limited.

Mr. Swindle thanked Ms. Wilson and the subcommittee for their hard work on this report and suggested that the Board adopt these recommendations to put forward to EM-1. He asked if there were any objections from the Board with regard to moving forward with the recommendations. Hearing none Mr. Swindle asked Ms. McCloskey to transmit these recommendations forward formally to the Assistant Secretary.

### **Innovation Challenge Discussion**

Ms. Tracy Mustin introduced the next subcommittee topic which addressed the Assistant Secretary's request to the Board to look into innovation opportunities and new ways to go about solving EM's problems with new ideas.

Ms. Mustin described the process that she and fellow subcommittee co-chair, Ms. Price, went through in developing observations and proposals for the Assistant Secretary's consideration, which included literature reviews, and research on other organizations' best practices. One of the first issues EM must address, is defining the problem that it faces.

Ms. Mustin talked about her discussion with the Chancellor of the University of South Carolina – Aiken. They discussed teaching young people to think and to think creatively. She described how the pervasive culture in EM is not always one that is open to new ideas and thinking outside the box. Ms. Price elaborated on the discussion, and described the lab that the school set up so that students could collaborate not only with each other and their professors, but fellows and others. She also noted the large numbers of people who are in their 30's surrounding Hanford

and the hiring of millennials that's going on at SRS. Ms. Price emphasized how important it is for people to not only find a career but to also find value and fulfillment in that job/career. She stated the importance of getting the National Laboratories involved in this process of getting young people to think creatively.

Ms. Mustin described the possibility of pairing experienced lab staff with students and young people who might have some technical background but not a deep history of the issues. She said that this might be an opportunity to bring people together to focus on some problems in a creative learning environment.

Ms. Mustin suggested that regulators could get involved in the process of identifying problems and coming up with solutions that might be implementable from a regulatory standpoint. She also mentioned the Grand Challenge that occurred with the Office of River Protection at Hanford as an example of something that might be replicated across the complex.

Ms. Mustin noted that it was important not to focus only on four-year educations but also technical schools and programs, and discussed "innovation days" that schools like Harvard and MIT have put on. These are dedicated days that facilitated open-minded brainstorming that eventually narrowed into more concise presentations and ideas.

Ms. Price spoke about the vast amounts of historical and institutional knowledge that currently exists within the cleanup complex. She said it was crucial to utilize this knowledge before people retire and to pair new employees with these individuals, so they may gain from their experiences.

Mr. Swindle suggested that the Board transmit these ideas to the Assistant Secretary as well as Under Secretary Dabbar. He noted that the subcommittee's product was not a formal recommendation, but more of a collection of observations reviewed by the Board and suggested to Departmental leadership.

Mr. Frazer Lockhart noted that the cleanup industry is heavily constrained for safety reasons by laws, regulations and orders. He said that any approach to innovation needs to take this fact into consideration. He encouraged the Under Secretary and the Assistant Secretary to get completely behind this approach to ensure its success.

Mr. Gilbertson said that this was directly linked to Assistant Secretary White's focus on end-state contracting and how we can build in innovation from the get-go.

Ds. Kimberlee Kearfott brought up an example of innovation done well at her university. She was able to utilize a group of undergraduate students and a relatively small amount of money to out-innovate some graduate students with research.

Mr. Josiah Pinkham discussed some of the constraints that are placed upon innovation. He noted that innovation is almost always a response to a threat to something that people need. He said that one of the shortcomings that the general public faces is they lack the value of the landscape and ecosystem that a tribal representative does. He said that his family interacts with that landscape at Hanford in a more intimate fashion than your typical American. He asked how EM

can incorporate those tribal values into this process of innovation. He said that when you empower the indigenous voices it benefits everybody because of their sensitive relationship with the landscape.

### **Public Comment**

Mr. Swindle adjourned the Board for a short break and the meeting resumed at 3:03 PM whereupon the Board paused for any public comment. No comments were made.

### **Board Business**

Mr. Swindle summarized some of the outcomes from the presentations earlier in the afternoon. He charged all the subcommittees with making sure to consider how to engage stakeholders in any work they do.

Ms. McCloskey said that she would work with Ms. Wilson to refine the Regulatory Reform Subcommittee recommendation and transmit that to the Assistant Secretary. Ms. McCloskey said she would do the same for the innovation challenge observations.

Mr. Swindle called for the approval of the May 2018 meeting minutes. No objections were heard from the Board and the minutes were approved.

Mr. Swindle noted the benefit of having the monthly Board calls and brought up one call where the Board heard a presentation on environmental liabilities. He noted the importance of addressing these in future Board work, specifically mentioning EM's pension liabilities.

Ms. McCloskey said that she was looking for input and ideas on the spring 2019 EMAB meeting. She asked for suggestions for locations.

Mr. Runyon suggested WIPP as the location. Several Board members seconded his proposal of WIPP. It was agreed that Ms. McCloskey would pursue exploring this idea as a possibility for spring 2019.

Mr. Swindle brought up the need for a board teleconference meeting to vote on the CRESP subcommittee's final report and recommendations.

Ms. McCloskey thanked Mr. Jared Bierbach and Ms. Alyssa Harris for their help in putting on the joint EMAB and EM SSAB Chairs' meeting.

She then acknowledged Mr. Swindle and Ms. Price who were retiring from the Board. She thanked them for all their service to the Board.

Ms. Price noted how much she was going to miss the Board and said how much she's appreciated getting to know everyone and working with her fellow board members. She thanked Ms. McCloskey and encouraged everyone to stay in touch.

Mr. Swindle said that there would be an announcement in the near future about some newly appointed Board members and he told Ms. McCloskey that he would work with her to transition his work.

The meeting was adjourned at 3:20 PM.