

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

PUBLIC MEETING MINUTES

**Key Bridge Marriott
1401 Lee Highway Arlington, Virginia 22209
September 30, 2015**

List of Acronyms

ASCEM –Advanced Simulation Capability of Environmental Management

DAS – Deputy Assistant Secretary

DFO –Designated Federal Officer

DOE – Department of Energy

EM – DOE Office of Environmental Management

EMAB –Environmental Management Advisory Board

EPA – Environmental Protection Agency

FACA – Federal Advisory Committee Act

FY – Fiscal Year

GAO – General Accountability Office

Hanford – (DOE) Hanford Site

HQ – Headquarters

LANL – Los Alamos National Laboratory

NASA – National Aeronautics and Space Administration

NEAC – Nuclear Energy Advisory Committee

NRC – Nuclear Regulatory Commission

OMB – Office of Management and Budget

OR – (DOE) Oak Ridge Site

ORNL - Oak Ridge National Laboratory

PNNL – Pacific Northwest National Laboratory

PEGASIS – PPPO Environmental Geographic Analytical Spatial Information System

PHOENIX – PNNL Hanford Online

Environmental Information Exchange

R & D – Research and Development

SRNL – Savannah River National Laboratory

SRS – (DOE) Savannah River Site

TD – Technology Development

V&V – Verification and Validation

WIPP – Waste Isolation Pilot Plant

WTP – Waste Treatment Plant

PROCEEDINGS

The Environmental Management Advisory Board (EMAB or Board) was convened at 1:04 p.m., EST on Wednesday, September 30, 2015, in the Lincoln Room of the Key Bridge Marriott in Arlington, Virginia. Board Chair Jim Ajello called the meeting to order and introduced the Board members.

Board members present:

Mr. James A. Ajello, Hawaiian Electric Industries, Inc.
Mr. Paul Dabbar, J.P. Morgan Securities, Inc.
Dr. Dennis Ferrigno, CAF and Associates, LLC
Mr. Sherrell R. Greene, Advanced Technology Insights, LLC
Ms. Jane Hedges, Washington State Department of Ecology and National Governors Association
Ms. Carolyn Huntoon, Consultant
Dr. Kimberlee Kearfott, University of Michigan
Mr. Frazer Lockhart, Stoller Newport News Nuclear
Ms. Lessie Price, Aiken City Council
Mr. Timothy Runyon, Consultant
Mr. David Swindle Jr., Federal Services/URS Corporation
Mr. Robert J. Thompson, Energy Communities Alliance
Adm. (Ret) Lenn Vincent, Defense Acquisition University

Board members not present:

Ms. Tracey Mustin, Consultant
Ms. Karen Patterson, Consultant

EMAB Designated Federal Officer:

Ms. Kristen Ellis, DOE-EM

Others present for all or part of the meeting:

Mr. Mark Whitney, Principal Deputy Assistant Secretary for Environmental Management
Ms. Betsey Connell, Senior Advisor, U.S. Department of Energy
Ms. Tania Smith, Acting Associate Deputy Assistant Secretary for Site Restoration, DOE-EM
Dr. Justin Marble, DOE-EM
Ms. Allison Finelli, DOE-EM
Ms. Alexandra Gilliland, DOE-EM
Ms. Elizabeth Schmitt, DOE-EM

OPENING REMARKS

The Environmental Management Advisory Board (EMAB or Board) was convened at 1:04 p.m. EST on Wednesday, September 30, 2015, at the Key Bridge Marriott in Arlington, Virginia, by EMAB Chair Mr. Jim Ajello. Mr. Ajello introduced the EMAB members and U.S. Department of Energy (DOE) representatives, and welcomed new EMAB members, Mr. Sherrell Greene, Admiral (Ret.) Lenn Vincent, and Mr. Frazer Lockhart. He also recognized the recent passing of former members Willie Preacher and Larry Papay, and reflected on their contributions to the Board.

The meeting was open to the public and conducted in accordance with the requirements of the Federal Advisory Committee Act (FACA). More information about EMAB can be found at <http://energy.gov/em/services/communication-engagement/environmental-management-advisory-board-emab>.

Mr. Ajello reviewed the meeting agenda and reminded EMAB members to recuse themselves from any discussion topic that presented a conflict of interest. He then discussed some outstanding work from the Risk Communication Subcommittee. Ms. Jane Hedges, Chair of the Risk Communications Subcommittee, took the floor to discuss the draft report entitled “The Advanced Simulation Capability from Environmental Management (ASCEM).”

Risk Communications Subcommittee Update

Ms. Hedges gave a brief overview of the Risk Communications Subcommittee’s draft report on ASCEM, which is an integrative simulation model developed to address EM’s waste storage and environmental cleanup challenges. It was developed by DOE’s national laboratories, mainly the Pacific Northwest National Laboratory (PNNL). Ms. Hedges noted that the subcommittee felt that ASCEM was not ready for public use and was suited more for professional modelers. ASCEM is still in the development stage, but will be made available to the public in the future.

Discussion

Mr. Ajello asked for an example of a problem scenario that ASCEM could address.

Ms. Hedges cited the BC Cribs and Trenches area at Hanford, a site with a large amount of contamination from old cascaded tank waste. ASCEM demonstrated the complex movement of chemical plumes through groundwater. Ms. Hedges suggested that this example could be used at other places throughout the Hanford complex to help craft performance assessments for determining cleanup standards and requirements.

Dr. Dennis Ferrigno posited that a future recommendation might be that DOE implements a consistent modeling system across all EM sites. Ms. Hedges agreed that this would be an excellent recommendation.

Mr. Lockhart asked about the intent of the model, and whether it was fully developed to be a plug-and-play for professionals at sites with groundwater and tank management programs, or whether it still requires labs and subcontractors to execute the model.

Ms. Hedges stated that she believes it was developed to be a plug-and-play model and that ASCEM is being held at labs while in development, and will move to DOE personnel and contractors once it gets a platform.

Mr. Vincent asked who has the governance over ASCEM, in terms of implementation.

Mr. Mark Whitney, Principal Deputy Assistant Secretary for EM, responded that EM’s Office of Site Restoration is working with the labs and others to develop the implementation.

Mr. Ajello asked where the expense associated with its development stood, and whether ASCEM was something that DOE could start disseminating and leveraging its application.

Ms. Hedges responded that she believed the tool was being developed in phases, and that there were some elements that were finished and usable and other elements that continue to be added to different platforms, to expand its capability.

Dr. Ferrigno suggested that the new EMAB members be sent the presentations on EM's risk communications tools. He also remarked that the modeling tool could be helpful to other agencies and could also help improve public trust.

Mr. Greene asked about the challenges across the complex and whether the initial goals and objectives of the model are still appropriate given EM's current priorities.

Mr. Whitney responded that EM has benefitted from ASCEM, even in its less than full-scale deployment. Plug-and-play may be difficult given the different challenges and composition of each site, including the different geology at each site. ASCEM is still in the development phase.

Mr. Tim Runyon asked whether ASCEM was intended to be publically released.

Ms. Hedges responded that it will be publically available, but that DOE does not expect members of the public to use it on their home computers.

Mr. Whitney stated that the complexity of the software interfaces would require a very technical person to navigate it. The data from the tools could be made available to the public. Mr. Whitney added that this type of sharing already occurs at Hanford and Oak Ridge.

Dr. Ferrigno added that the data from it could be useful to a university.

Mr. Ajello asked the Board how they would like to proceed with the draft report.

Ms. Hedges suggested that the Risk Communications Subcommittee schedule a teleconference with a DOE representative and a PNNL representative to clarify information before proceeding with a recommendation.

Dr. Justin Marble, now with the DOE-EM Office of Disposition Planning and Policy, joined the discussion to provide a brief overview and to answer questions regarding ASCEM to the members. Dr. Marble previously served as the program manager for ASCEM. He highlighted that ASCEM is a Java-based software code that can operate across different hardware platforms e.g. laptops to supercomputers and that the advances in the ASCEM code can be utilized by a site using different transport codes like a plug-and-play system through a series of data transfers.

Mr. Robert Thompson asked whether the public would have access to it. Dr. Marble responded that there was a licensing question but that has been solved. Once the ASCEM code is released it will be open source and available to members of the public to download it to their computer and use. The type of modeling analysis a user requires of the ASCEM code determines the type of computer hardware necessary. For instance, a complex question may require a supercomputer, whereas a simple modeling problem could be answered on a current personal laptop.

Mr. Thompson asked whether DOE is continuing to roll out ASCEM.

Dr. Marble noted that currently EM has a limited technology development (TD) budget; because of this, ASCEM's development process has moved slower than expected although still progressing towards a regulatory qualified code.

Mr. Thompson inquired whether the program was ready for a "greater audience."

Dr. Marble responded that he did not know since he has been away from the project for several months, but that the ASCEM development team planned to release an operable product by the end of fiscal year.

Mr. Greene asked whether this program captures the right phenomenon and about the verification and validation (V&V) status of the model, and whether the focus of ASCEM's code is on groundwater modeling.

Dr. Marble responded it is for more than just groundwater transport and encompasses the vadose zones as well as the transport of other subsurface processes. He also noted that mercury transport and chemistry is a serious issue and that DOE is working to incorporate its processes. He also responded to Mr. Greene's question about V&V, stating that Java is being used for the graphical user interface also known as Akuna, but that the actual transport and chemical process code is not Java based.

Mr. Greene asked to what extent is the V&V focused on comparison to data as opposed to code-to-code comparisons. Dr. Marble responded that a lot of modeling is dependent on the data and so DOE is making sure data is available. Different coding tools examine sensitivity analysis and uncertainty analysis, which are within the ASCEM framework of code. One thing that is being worked on is the creation of an all-in-one system, so that data transfers between different codes are limited to ensure data validity is maintained.

EM PROGRAM UPDATE

Mr. Whitney reported the recent confirmation of Dr. Monica Regalbuto as Assistant Secretary for Environmental Management, and recognized Ms. Betsy Connell, the Secretary's Senior Advisor for Environmental Management, who is currently assisting with EM Chief of Staff functions. He then thanked departing members, Mr. Ajello and Dr. Ferrigno, for their service to the Board and the EM program.

Mr. Whitney summarized a number of recent accomplishments and challenges across the EM complex:

- EM held the first-ever EM Cleanup Workshop;
- The vitrification of over 4,000 canisters of waste at the Savannah River Site (SRS);
- Shipment of all plutonium out of the State of Washington
- Movement towards the completion of the Plutonium Finishing Plant to slab on-grade by the end of next year at Hanford;
- The upcoming completion of the Salt Waste Processing Facility at SRS;
- The upcoming completion of retrievals at C Farm, EM's first tank farm retrieved at Hanford;
- The closure of two additional tanks at SRS next year;
- EM is scheduled to finish transition of cleanup operations from NNSA to EM at LANL.

- Challenges at the Integrated Waste Treatment Unit (IWTU) in Idaho that have delayed operations are being overcome and EM is making progress towards getting that facility up and running sooner rather than later in order to close the final four tanks located there.
- At Hanford, EM is facing a greater challenge than anticipated at the 324 Building, a waste site that is more radioactive than anyone expected and will require additional cleanup and precautions.

Mr. Whitney made a number of remarks related to five-year planning efforts. He noted that the vast majority of EM cleanup projects are not one-year projects, but multi-year, or even multi-decade projects. They are complex and require advance planning, procurement strategies, and a skilled work force.

Over the past year, EM has worked on a five-year planning initiative to allow the program to plan in a responsible and realistic way that will result in the highest risk work getting done quickly, safely, and efficiently. Mr. Whitney explained that EM has not developed five-year budget profiles since 2008. He noted that based on guidance from the Office of Management and Budget (OMB), EM will establish five-year planning profiles for each site based on the assumption of flat program targets.

EM intends to establish priorities and approaches to the remaining cleanup scope; provide a basis for site baseline updates and regulatory and procurement planning and negotiations; and inform budget formulation for fiscal year (FY) 2017 and beyond.

The EM FY 2016 budget request provides insight into EM's priorities. The budget request has a large focus on tank waste and tank waste closures—that is Hanford, Savannah River, particularly the Salt Waste Processing Facility, and Idaho and IWTU. The Waste Isolation Pilot Plant (WIPP) is another top priority. EM has to look to the next five years and its upcoming decisions on budget and scope and the reduction of risk to human health, life-cycle costs, the ability to take projects to completion, community and tribal input, state and regulator priorities, and more.

EM has compliance requirements of almost \$8 billion a year. Most DOE officials are not predicting an \$8 billion annual budget for the program over the next five years and because of this EM has been left with the challenge of trying to align the realities of cleanup and the fiscal constraints EM has with the regulatory process.

Maximizing every cleanup dollar requires focusing first on the projects with risk to human health and the environment if left untreated, while developing workable solutions with regulators and stakeholders on all remaining cleanup deadlines. This approach provides priority projects with the attention required for success and ensures accountability for all cleanup work. This is an EM program, not a site-specific program. EM has 16 sites in 11 states and they are all interconnected.

Recently, EM has started to engage the Environmental Protection Agency (EPA). EM site managers and the EPA site and regional officials are focused on their own sites, but because site decisions can have complex-wide decisions, it is important to communicate across the sites. EM began a dialogue with EPA Deputy Administrator Stan Meiburg and his senior staff to improve communications with all levels of the EPA, ensure the cleanup program is viewed in a complex-wide manner, understand priorities within the context of frank discussions about budget realities and reduce impediments to clean up the sites.

Earlier this month, Mr. Whitney spoke with the Environmental Council of the States (ECOS) members about the EPA Dialogue. EM is hoping to bring the state regulators into the conversation. These dialogues, combined with a multi-year planning approach, will result in a clearer understanding of the possibilities and tradeoffs. A more informed outlook of the next five years, based on a conservative level of planning, will better inform these discussions and regulatory milestones.

Mr. Whitney recognized that the EMAB Risk and Risk Communications Subcommittees are still working on tasks and noted that he looks forward to their final reports.

Mr. Whitney mentioned Dr. Regalbuto's previous involvement with the Nuclear Energy Advisory Committee (NEAC) and how dedicated she is to EMAB. He suggested that it might be helpful for EMAB to look at the structure of other boards, including NEAC, and to draw on each member's collective experiences with EMAB and other boards to create a list of best practices for the Board.

Mr. Whitney stated the importance of developing EM's next generation, making note of EM's "Recent Graduate Program." The program brings onboard 20 to 25 fellows a year. The current class is only the second class to date. Mr. Whitney suggested that EMAB could develop recommendations on how to make EM more attractive to the younger generation.

Discussion

Ms. Lessie Price responded that DOE has been sending students to sites across the country in different capacities. She believes that DOE is bringing young people into the workforce and exposing them to site work, but that they are losing them to employment with federal contractors.

Mr. Whitney agreed and stated that it was a common and unfortunate problem for EM and he suggested that the workforce issue, specifically the loss of trained and qualified talent, should be further explored.

Mr. Vincent commented that EM is being pulled in a political cycle each year and that affects the budget and budgetary planning. He highlighted that new political leaders have the ability to change long-term plans and that if there is not continuity in leadership, there should at least be continuity in the plan.

Mr. Whitney responded that the last three years without an EM Assistant Secretary had been challenging. He noted that Mr. David Huizenga, former Acting Assistant Secretary for EM, maintained focus on key priorities and key issues throughout his tenure and that Secretary Ernest Moniz continues to provide excellent support and attention to the EM program.

Mr. David Swindle asked about budget constraints and whether there would be any new money coming into the sites or programs or whether EM has to accomplish these things with less money.

Mr. Whitney cited this as the reason why five year planning is so important, especially given that distribution across the sites varies. WIPP recovery is an example of changing needs and distribution of funding. The costs associated with the incident were higher than anticipated. Mr. Whitney added that when there are two organizations involved, like in the case of WIPP with NNSA and EM, there will be additional administrative costs.

Mr. Ajello encouraged EM to celebrate its successes; it is imperative to morale. Mr. Whitney responded that he feels this is part of the problem and that it is easier for those people who live close to the sites to celebrate the successes, but that those citizens who do not live close to a site may find it more difficult to acknowledge the great accomplishments that EM has achieved.

Mr. Greene stated that, in his opinion, EM and the National Aeronautics and Space Administration (NASA) have a lot in common in terms of planning horizons, specifically regarding the way the two agencies form their plans. He asked whether there had been any effort for EM management and NASA to discuss best practices and how decade-long goals and objectives can be tackled.

Dr. Carolyn Huntoon, who previously served as the Assistant Secretary for EM and also worked at NASA, responded that she noted the similarities between NASA and EM, specifically the public's acknowledgement of each agency's problems and not their successes.

Mr. Greene asked what lessons can be learned from NASA about successfully executing a project that has a ten-year lifetime.

Dr. Huntoon responded that there are many similarities and that a discussion should be held between EM and NASA.

Mr. Whitney responded that he thinks one of the problems EM has is that annual appropriations do not accommodate largescale projects like WTP very well. The Secretary has done a lot of work in the last year and a half on improving DOE's project management. However, consistency and predictability in appropriations for large projects continue to pose the biggest challenges.

Mr. Paul Dabbar noted that the environmental theme is permeating all types of businesses, including his own large investment bank. Potent economic and business impacts can exert change and bring awareness to environmental issues. He suggested that EM may not be harnessing this power to bring EM cleanup issues beyond the local scope.

Mr. Runyon brought up DOE communication to the public. He noted how important it is to share presentations, graphics, and slideshows with the public to help explain the complexity of EM's work. He encouraged EM to work on better crafting their message for public consumption. Mr. Ajello added that he sees a benefit to making EM's work more personal and encouraged EM to focus on how its mission affects the public.

Mr. Thompson asked about EM's limitations, both budgetary and policy-related, regarding self-promotion. He noted that hiring a PR firm could help, but asked whether that was a possibility.

Mr. Whitney responded that he tries to think about who needs to hear and understand the message, and why the message is important. He mentioned that these issues are important at the site level. Site staff need to see that HQ management views completions and milestones as major accomplishments.

Mr. Thompson asked how important the role of the Cleanup Caucus is in educating Congress. Mr. Whitney responded that Congressman Chuck Fleischmann, Chair of the Cleanup Caucus, has made an effort to include more community stakeholders in the caucus. Rep. Fleischmann is a longtime supporter of the EM program and is also working to increase Congressional participation in the caucus.

EM continues to work on budget issues and is fortunate to have an OMB examiner that has a long history with the program. Mr. Whitney acknowledged that a broader message for the general public is a great idea, but the investment of time and money would need to be considered.

Mr. Runyon stated that the sense of stewardship needs to be communicated to new EM staff. The legacy of the Nuclear Age and the war effort and the idea of stewardship is integral to the EM mission. He encouraged EM to communicate the history of the EM program.

Mr. Ajello asked about the budget philosophy under the current budget constraints.

Mr. Whitney noted that historically DOE has not done such a great job on infrastructure investment. Deferred maintenance has been a growing problem for DOE. To address the backlog of deferred maintenance, the Secretary created a directive for the FY 2016 budget cycle to drive programs to focus on investment in infrastructure. The Secretary also established an infrastructure working group and an excess facilities working group. Many facilities that are not in the EM scope and are not currently owned by EM need to be part of the cleanup program, but there is not funding for them at this time. So, EM is working on adding these concerns to the budget formulation process. The excess facilities group is working on a report to the Secretary that will inform the next budget cycle.

EM briefed the Secretary on FY 2017 concerns, including infrastructure and deferred maintenance. After WIPP, EM is working on producing a directive that would eliminate a backlog of deferred maintenance of safety related systems.

Ds. Huntoon asked whether there was a plan for these organizations to turn the facilities and infrastructure over to EM, and whether it was turned over with money or whether EM would need to find funding for them. Mr. Whitney responded that EM will take those facilities when there is a budget for it, but until then the programs that own them will maintain them. Later this year, EM will make recommendations to the Secretary on a list of prioritized facilities.

Ms. Swindle asked about the state of DOE's engagement with the U.S. Government Accountability Office (GAO) regarding the projects on the GAO High Risk List. Mr. Whitney responded that the Secretary is trying to instill greater discipline into the EM project management process, and has established the Energy System Acquisition Advisory Board (ESAB), an informal group that provides advice to the project management executive, and the Project Management Risk Committee, which is chaired by DOE's Chief Risk Officer, Mr. John MacWilliams.

Mr. Whitney also mentioned the work of Paul Bosco, the Director for the DOE Office of Project Management Oversight & Assessments, whose office goes out to the EM sites to do project peer reviews for projects over \$100 million.

Mr. Swindle commended EM for setting up the risk register and the position of Chief Risk Officer.

Mr. Vincent expressed interest in learning more about the development and training of project managers.

Mr. Whitney suggested that John MacWilliams should attend the next meeting to speak on these topics. Mr. MacWilliams is looking at all types of risk, including financial and reputational risks.

Public Comment Period

There was no response to the request for public comment.

EMAB Strategic Planning Discussion

Mr. Ajello then directed the discussion to NEAC and other advisory committees that could serve as a model for how EMAB is organized in the future. He suggested that board members compile a list of best practices for EMAB to consider. He noted that Dr. Regalbuto has tasked the board with creating a product regarding workforce development and asked the board what other products and projects that EMAB could propose.

Ms. Kristen Ellis, Designated Federal Officer for EMAB, noted that the members had received two tasks from Dr. Regalbuto to consider: 1) EMAB's structure, and 2) workforce issues. She suggested that the Board start by looking at the work they had previously done on human capital. Ms. Ellis also suggested that Mr. Vincent and Mr. Lockhart could contribute to the longstanding Acquisition and Project Management Subcommittee and noted that the Risk Communications Subcommittee still had some work to close out.

Mr. Whitney emphasized that Dr. Regalbuto really wants to leverage EMAB's expertise and experience as best it can and that this time of transition was an opportunity for the Board to revisit its structure and focus.

Ms. Price suggested reindustrialization as topics that may benefit from the Board's attention and cited land transfer examples from Oak Ridge. Mr. Thompson added that the City of Richland, Benton County, and Port of Benton are receiving a land transfer from DOE, and the stakeholders, tribes and businesses are all excited to see whether they can take that land and put it to a productive use. The topic of reindustrialization is timely.

Mr. Ajello suggested that a case study on that may be helpful to the Board.

Mr. Greene suggested that EMAB should be invited to participate in the next EM Cleanup Workshop. Ms. Ellis agreed to take that action.

Mr. Ajello asked for a motion for adjournment. Mr. Thompson moved for adjournment and Mr. Swindle seconded. The meeting was adjourned at 3:49 p.m.