

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

PUBLIC MEETING MINUTES

**United States Department of Energy Information Center
Building 1916-T1
1 Science.gov Way, Oak Ridge TN 37830
April 4, 2017**

PROCEEDINGS

Board members present:

Mr. Paul Dabbar, J.P. Morgan Securities, Inc.
Ms. Jane Hedges, Consultant
Dr. Carolyn Huntoon, Consultant
Dr. Kimberlee Kearfott, University of Michigan
Mr. Frazer Lockhart, Stoller Newport News Nuclear
Ms. Tracey Mustin, Consultant
Ms. Karen Patterson, Consultant
Mr. Josiah Pinkham, Nez Perce Tribe
Ms. Lessie Price, Aiken City Council
Dr. Beverly Ramsey, Desert Research Institute
Mr. Timothy Runyon, Consultant
Mr. David Swindle Jr., Federal Services/URS Corporation
Mr. Robert J. Thompson, Energy Communities Alliance
Ms. Shelly Wilson, SC DHEC, ECOS, NGA

Board members not present:

Adm. (Ret) Lenn Vincent, Consultant

Acting EMAB Designated Federal Officer:

Ms. Jennifer McCloskey, DOE-EM

Others present for all or part of the meeting:

Ms. Sue Cange, Principal Deputy Assistant Secretary for Environmental Management
Ms. Stacy Charboneau, Associate Principal Deputy Assistant Secretary for Field Operations
Mr. Warren Gooch, Mayor of Oak Ridge
Mr. Jay Mullis, Acting Manager, Oak Ridge Environmental Management
Ms. Belinda Price, Chair, Oak Ridge Site-Specific Advisory Board
Mr. Jared Bierbach, e-Management

OPENING REMARKS

The Environmental Management Advisory Board (EMAB or Board) semi-annual public meeting was convened at 9:00 a.m. CT on Friday, April 4, 2017, in Oak Ridge, Tennessee by EMAB Chair David Swindle, Jr. Mr. Swindle reviewed the meeting agenda and reminded EMAB members to recuse themselves from any discussion topic that presented a conflict of interest.

Mr. Swindle thanked the EMAB members and U.S. Department of Energy (DOE) representatives for their attendance, and thanked Mr. Jay Mullis, Acting Manager of the Environmental Program at Oak Ridge, for hosting the meeting. He then noted that on March 22nd, Secretary of Energy, Rick Perry, recognized Oak Ridge's Wendy Cain as the Federal Project Director of the Year.

Mayor of Oak Ridge, Warren Gooch, welcomed attendees on behalf of the City of Oak Ridge and gave a brief history of the Oak Ridge site. He touched on some of the City's current infrastructure projects. The City is working hard to attract additional visitors and is very excited about the Manhattan Project National Park.

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>.

EM PROGRAM UPDATE

Ms. Sue Cange, Acting Assistant Secretary for Environmental Management welcomed the Board members and the members of the public to the meeting. She thanked the Board members for their time and expertise they have dedicated in order to provide advice to the Office of Environmental Management.

She began her remarks by announcing that Ms. Tracy Mustin has agreed to serve as the Vice Chair of EMAB. She stated that Tracy will make an excellent complement to Chair David Swindle. Ms. Cange continued, stating that she values this partnership and that she plans to continue to work hard to ensure that partnerships are strengthened between DOE and all of its various stakeholders, as well as its regulators and others that contribute to the success of the program. She noted that her goal is to make this a focus of the work going forward with the EMAB.

Turning to the program, she stated that this is an exciting time for EM and that it is a time for change. She noted that EM has begun briefings to Secretary Rick Perry on various aspects of the EM program. She is very encouraged that he is dedicating his time to the program to learn about EM's challenges and accomplishments. She also stated that she was informed that the President had announced his intent to nominate Dan Brouillette to the Department of Energy as Deputy Secretary and she hoped that the confirmation process would not be delayed.

Accomplishments and Priorities

Ms. Cange then turned to the program accomplishments:

In the last year, Oak Ridge completed the demolition of the five gaseous diffusion buildings that were located at the former K25 gaseous diffusion plant. This is the first time that complete demolition of a gaseous diffusion plant has been accomplished.

Operations have resumed at the Waste Isolation Pilot Plant (WIPP) following a three year shut down. In January, operations resumed with emplacing waste that had been stored above ground at the site when the shutdown occurred. Shipments are now being made from the Savannah River site and Idaho site to WIPP for waste emplacement. This has been an important learning experience and one lesson learned is the importance of preventive maintenance.

Demolition of the iconic plutonium finishing plant at Hanford is underway. This is one of the highest risk facilities and demolition is on track to slab-on-grade by the end of this year. Progress is also occurring at the C Farm at the Hanford site.

Savannah River completed construction of the Salt Waste Processing Facility – under budget and in shorter time than first projected.

Idaho celebrated the retrieval of 75,000 cubic meters of waste. West Valley located canisters of vitrified high-level waste to dry storage this past year. Moab hit the half way mark for completion of removal of waste.

Strategic Initiatives

Headquarters Reorganization

Ms. Cange spoke of one of the broader management initiatives, a reorganization at headquarters for the EM program. The goal is to move away from a centralized headquarters control model and move to a field-centric model where EM is better able to support the work being done in the field. It is still early in the process. It will take about two years for the cultural shift to take place.

Five Year Budget Development

Ms. Cange stated that EM transitioned to a five year planning process in order to give greater stability to the sites to have a better understanding of what their budget might be. This has been helpful in allowing the sites to develop various work plans. To take this a step further EM has begun a strategic planning initiative led by Mr. Steve Trischman in the Office of Budget and Planning. It includes field input to be shared with stakeholders, and it will be completed by 2019.

Ms. Cange stated that EM continues to look for way to perform in a more cost effective manner is working with EFCOG to help identify a new initiative for this year. Ms. Stacy Charboneau and Ms. Cange have identified contract administration has an area of focus. Time and resources have been devoted to the management and administration to contracts across the site.

Ms. Cange stated that EM hopes to leverage the expertise and capabilities of the National Laboratories, in particular with EM's lab the Savannah River National Laboratory. The goal is for it to become a stand-alone laboratory that is separate from the Savannah River site. Eventually, it will be able to support the entire EM program. In that regard, a National Laboratory Policy Officer position has been created.

Ms. Cange then spoke about the establishment of a new national EM laboratory network. SRNL is co-Chairing this year with Pacific Northwest National Lab. They are working on developing a capability statement for all of the labs which will be made available to the field sites.

Technology Development

Technology development will play a huge role in helping complete EM's mission. The laboratory network is focusing on a few key areas as determined by the Technology Development Plan, such as technetium 99, mercury, cesium, and strontium, a programmatic testbed capability to aid in the maturation of new technologies and enhancing work safety. The EM program has made significant progress with footprint reduction, and is now turning attention back to technology development to focus on remaining issues.

Annual Performance Plan

Ms. Cange introduced the Annual Performance Plan, which will enhance organizational excellence, improve performance, and support success in the field. The EMAB members have requested a copy of the document.

Cleanup Goals

Ms. Cange reviewed the cleanup goals for next year:

- Complete demolition of the plutonium finishing plant at Hanford
- Continue to make progress on the Waste Treatment and Mobilization Plant that is integral to beginning treatment of the low activity waste at Hanford
- Commissioning of the Integrated Waste Treatment Unit (IWTU) at Idaho
- Completing the design of a new mercury treatment facility at Oak Ridge
- Completing cleanup of the East Tennessee Technology Park
- Preparing facilities for demolition at Portsmouth and Paducah
- Continuing with D&D activities at West Valley

Budget Focus

Ms. Cange stated that with regard to FY 2017 it is uncertain if there will be a continuing resolution or an Appropriation bill, but EM will be prepared either way. Ms. Cange concluded, noting that EM is well-positioned to meet its challenges.

Discussion

Mr. Swindle remarked that the National Laboratory Policy Officer, Mark Gilbertson, has been a longtime individual leader within the EM program and has worked with EMAB in a very transparent and collaborative manner. He also requested for Jennifer McCloskey to ensure that all of the Board members receive a copy of the Annual Performance Agreement which Ms. Cange referenced.

Ms. Price asked whether the sites might have skimmed on preventive maintenance in order to meet the other goal of budget reduction. She also asked how often DOE as a Department is interacting with the Appropriations offices informing them of the great work that is being done. Ms. Cange replied that she is confident that the Field Offices did not compromise performing some of their activities due to the overarching goal of the five percent cost reduction. She stated that in light of the shutdown of WIPP, there was a strong focus on preventive maintenance and the field managers understand that. She also noted that the \$100 million that was realized from the initiative was largely used to address the maintenance backlog. Finally, she noted that not all the sites realized a five percent reduction and that exceptions were made for various reasons.

Ms. Cange recognized the importance of frequently interacting with the Hill to promote EM's accomplishments. She stated that she and Ms. Charboneau are in these discussions quite often. She noted that there are some restrictions, but she makes sure to discuss not only the accomplishments, but also the challenges. Ms. Charboneau added that they have a good relationship and receive support from the appropriators. She noted that they find EM employees to be credible and that they reach out to them quite often with questions.

Mr. Paul Dabbar asked if additional money could be used to accelerate the cleanup work. Ms. Cange replied that they are trying to make improvements to contractor and project management activities, and to improve the performance of projects. She said there is still more work to be done in this area, particularly on some of the larger projects.

Ms. Tracy Mustin asked about the budget and whether the five year plan will be given credence or priority by OMB in the budget process. She noted that regulatory commitments have tended to be the overarching budget driver. Ms. Cange replied that she has brought this up in her meetings with OMB and believes it was fairly successful. She stated that she expects to continue discussions with them and that it may be too early to tell how much will change as a direct result.

Ms. Shelly Wilson asked about the new scope for Y12 and Livermore facilities. Ms. Cange said that there is additional funding to address some of the highest risk facilities that are located at Y-12 and at Lawrence Livermore. Currently those facilities are owned by NNSA and there are requirements that NNSA must meet in order to transition the sites to EM. She noted that EM will be spending money primarily on characterizing, preparing the critical decision documents that are necessary to tear down facilities, or moving equipment.

KNOWLEDGE MANAGEMENT DISCUSSION

Ms. Tracy Mustin acknowledged EM's long-term mission. She stated that over 50 percent of the EM workforce is eligible to retire in the next five years, causing a loss of critical agency knowledge. In recent years, it has become more common for workers to want change in their careers instead of committing to a lifelong career with one organization. Hiring freezes have also affected the ability to bring in entry-level talent. Knowledge has become a commodity that must be managed.

Ms. Mustin introduced the three types of knowledge:

- Tacit Knowledge – Knowledge employees have that has not been formalized or documented. The knowledge cannot be easily accessed by other employees.
- Explicit Knowledge - written knowledge, captured, documented, or codified.
- Implicit Knowledge – Implied or understood knowledge that is not documented.

Knowledge management is important for full back up capabilities for each member of the staff. Career advancement plans must be in place for each team member and preparations must be made for replacing potential retirees. Proper documentation practices must be a priority to ensure incoming personnel have access to the knowledge they require.

Ms. Jennifer McCloskey noted that NASA has a career advancement plan in place for each incoming employee. Ms. Mustin stated that millennials are attracted to clear opportunities for career progression, so this is a motivation and retention tool.

Ms. Mustin reviewed the three focus areas: knowledge management, succession planning, and retention as a priority. A written knowledge management strategy should be in place to ensure its priority.

Ms. Mustin then introduced the principle of “thirds”, in which each employee should be spending one third of their time with their peers, one third with those more experienced and one third with those less experienced. This balances sharing knowledge and obtaining knowledge.

Some tools Ms. Mustin discussed include job journals to document unique skills, knowledge cafes to discuss technical knowledge socially, and flash mentoring to share knowledge on a specific project or topic.

She recognized the current Lessons Learned program at EM and suggested that more discussions should be had about these lessons in order to fully utilize the program. The long-term mentoring program needs to be further developed and more robust. She suggested introducing job shadowing for junior staff and revisiting EMERS to increase documented communication of knowledge sharing. She also suggested enhancing the EM Succession Plan with knowledge management ideas and using it to help put some knowledge management goals in place. Individual Training Plans should be more visible to employees.

She then emphasized the need for simple morale boosting activities and leadership walk-arounds for employees to see their leadership face to face. Rotational assignments can be used as a motivational mechanism for employees.

She stated that knowledge management should be incorporated into the Manager Performance Plans. A retiring employee should have their job responsibilities reduced during their last six months so that they have enough time to properly train their replacement.

Ms. Mustin summarized the important points of the presentation and opened up the floor for discussion.

Discussion

Mr. Josiah Pinkham recognized the importance of tribal members' knowledge that they have to offer. He drew a parallel between tribal members looking to their elders as junior staff will need to look to senior staff. He stated that young people are looked to for inspiration and motivation and he is always striving to make life better for younger generations. He encouraged EM to incorporate that vision and belief into their work.

Ms. Mustin described young tribal members transcribing the native language and oral history from their elders so that it is not lost when they pass away. This is a similar knowledge management concept.

Ms. Kim Kearfott stated her concern that the inability to hire young talent will negatively affect academic programs and suggested offering more undergraduate scholarships, as well as internships and fellowships, to maintain the prosperity of the younger generation.

Mr. Dabbar emphasized the importance of a willing-to-help culture in EM and encouraged self-reflection on the current culture.

Dr. Carolyn Huntoon urged the team to enhance their relationship with contractors. She stated that an accurate succession plan has always been hard to pin down.

Mr. Thompson encouraged EM to think outside of what they've been taught and investigate deeper into why the failures that are now lessons learned were failures to begin with.

Ms. Price appreciated the priority of diversity inclusion and internships for minority students. Ms. Cange recognized the importance of elevating a safety-conscious work environment. She discussed ensuring that the benefit of diversity inclusion programs is being maximized. Ms. Cange and Ms. Charboneau will be attending an EFCOG meeting to discuss emerging issues.

EXCESS FACILITIES DISCUSSION

Mr. Frazer Lockhart recognized the EMAB Subcommittee team for providing information on current initiatives and the EM thought process. He noted the slides are meant as a reference and potential recommendations.

He opened the presentation by noting that excess facilities have been a long time liability. With increased scrutiny from Congress and OMB, there should be a specific plan for any additional budget toward decreasing the Department's excess facilities. With aging infrastructure and

preventive maintenance issues, there is a need for action. For the excess facilities, the Report to Congress in December has excellent information. There are 2,349 excess facilities and the number is growing, creating a substantial workload and cost. It is a funding and priority decision by management. There has been a great deal of excess facility analysis over the last ten years, including excellent lessons learned in D&D techniques. Unfortunately, most lessons learned have not been written down.

Mr. Lockhart continued, stating infrastructure and maintenance often struggle for priority. Addressing infrastructure concerns are well behind other priorities, but still pose potential issues. Because it is not as broad-based, and does not have the same level of consistency as the analysis for excess facilities, infrastructure concerns can cause a serious issue. A significant number of facilities are still in NNSA.

He noted that if you remove the lower-risk facilities, and focus on the high radioactive inventories, you will observe higher risks and higher age of the facilities. Currently, there are approximately 45 very high-risk facilities. Most of those 45 are at Y12 or Lawrence Livermore; hence, the funding decisions.

Team prepared benchmarking of other federal agencies. Specifically, DOD because of the team's background and experience establishing programs for evaluation and prioritization of preventive maintenance and aging infrastructure, and replacement issues. Many agencies such as the DOD work 5-7 percent facility infrastructure maintenance into their budget. NNSA, specifically within DOE, has utilized a software tool to assist in analyzing infrastructure and maintenance and evaluation. Because most of the current and future inventory comes from NNSA, this may be a good option. Team also reviewed practices in commercial industry, noting a greater complication due to public funding versus a private-business reinvestment.

Mr. Lockhart then stated that expending political capital to address excess facilities and infrastructure should be considered. EM facilities are continuing to age. A proactive approach should be taken to ensure safety over the next 40 to 60 years. Utilizing infrastructure successes from NASA and DOD are critical.

He noted that the gathering of data, evaluations, and utility systems, will provide common aspects for Sites and their common services, also known as centralizing. The implementation and decisions can be specific for a Field Site, common language should be used for appropriators and OMB. The possibility of alternative financing in addition to front end money as done on Utility systems at Savannah River with the Regen Plant. When capital construction is paid off over the execution and provision of those services on a unit basis. This is not ideal for D&D facilities since no service is being provided.

He discussed excess facilities contract administration to include cost-plus-incentive-fee-type Contracts for certain scopes. When you want to remediate a facility, and take it down, a cost-plus-incentive-fee contract vehicle can be very successful. The bundling of some easier-to-perform, larger-footprint efforts for D&D, with some of the more difficult efforts, could allow for a smaller overall footprint and a more holistic effort in lieu of cherry-picking certain projects.

Mr. Lockhart stated that the recognition of regulatory framework will allow regulatory authority for cleanup work, but not explicitly for D&D work. Dialogue should continue on D&D projects as well as infrastructure facilities with the regulators. Discussions will address how facility issues and infrastructure issues are impacting the Program, so budget considerations can be known.

He discussed the bundling of the D&D requirements into the excess facilities effort for new construction. DOE utilized the buildings remediated as credits to use for new construction by NNSA and Science and others. As a result, NNSA is determining more facilities to return to EM for S&M. Determining the required funds for S&M is an issue. Dialogue should continue when addressing funding and transfer.

Mr. Lockhart noted that opportunities exist for greater benchmarking, selecting, and utilizing established systems from DOD and NNSA. He also stated that there is an advantage to developing a preventive maintenance and infrastructure analysis program to be coordinated to work in unison to aide in addressing funding and priority decisions, as well as data and trends for the Department.

Shelly Wilson asked how these recommendations affect jobs and economic development, and how State and local Governments can boost and foster economic development. Sue Cange referenced the Reindustrialization Program at Oak Ridge, which was to barter cleanup of space in exchange for reduced lease rates for that space for commercial uses. This was a great example where a company could use their state-authorized NRC Licenses to perform cleanup of DOE legacy waste. In exchange for that cleanup work, they leased the space at a reduced rate for their own private or commercial interests. General Counsel reminded the Board, there are many reasons why the Department cannot advocate, or abdicate its responsibility for cleanup of legacy waste to a private company.

Ms. Charboneau noted current EM initiatives. The December Report to Congress credits EM with over 3,000 facilities D&D'ed over the past 25 years. EM's focus should be on reducing risk, and with limited resources and budget, reducing the hazards in its facilities. The Report to Congress notes 9 percent of EM facilities are high risk. EM should remove the materials at risk, remove the hazards, and ready those facilities for demolition. Between 7 and 15 percent of EM's overall portfolio is excess facilities and D&D. Tank Waste is currently the highest risk, while D&D and excess facilities is the second greatest risk. She stated that EM should address excess facilities to support modernization of nuclear security in alignment with the new Administration. There exists an infrastructure database of projects which are shovel-ready. Review of regulations should be considered.

Ms. Charboneau noted that DOE is supplying the necessary support and resources to the Field for their success in executing their mission. Groundwater is critical and also needs to be considered as well as possible new scope into the EM portfolio. There is a need to balance all risk in the EM portfolio to reduce adversity to human health and the environment. Mr. Lockhart noted, excess facilities and infrastructure are a large part of EM's mission, certainly not the only part.

Mr. Jay Mullis noted that the makeup at Y12 and Oak Ridge National Lab includes 350-plus

excess facilities, 25 percent of the high-risk facilities within DOE, with a range of chemical and nuclear hazards with four different program owners for those facilities, NE, NNSA, EM, and Science facilities. All four Programs are represented at Y12, which represents a unique opportunity as noted by Frazer. Some of our facilities are not EM-owned. EM owns the groundwater and soil cleanup, so if a building is in the path to clean up groundwater, someone must remove it.

Jay noted the numerous Oak Ridge successes, and how they coordinated clean-up with other offices. He addressed limited budget in coordination with specific clean-up activities for each building on site. Stabilizing of structures is an important part of the puzzle, allowing the reduction of risk profile. Additional funding would allow for activities to occur without the long negotiation process.

Discussion

Mr. Dave Swindle stated that in addition to hazards, from a revenue stream, industry is noting Boards of at least two of the major oil companies are discussing how to allocate funds since it's affecting their credit rating and insurance. Frazer Lockhart concurred.

Ms. Mustin asked if there was now a greater possibility to transfer facilities. Ms. Cange noted that there is room for discussion and EM has noted when they have the funding to either D&D specific facilities or maintain them, they may accept them in the future. This does not mean that EM has opened the door, but it is a step in that direction.

Ms. Mustin asked if there were any EM energy-efficient programs. Ms. Charboneau responded that the Administration is looking for specific partnerships. EM is trying to determine which project may be a fit and suggests the natural-gas pipeline at Hanford. Ms. Mustin asked for a discussion on contract types for this challenge. Jay Mullis noted, several years ago, Oak Ridge prepared a characterization contract allowing three small businesses to participate. They would give the site a task-based contract. Since then, one of the small businesses has graduated out of the small business notation. That was a cost-effective way to characterize.

Ms. Karen Patterson noted that she was very encouraged by the discussions on budget planning and regulatory obstacles and she would like to see DOD reflect some of EM's direction as well as EM using DOD's budget model to include a percentage for excess facilities and infrastructure opportunities.

Ms. Jane Hedges noted that how the budget is divided must be determined in order to plan accordingly. Ms. Charboneau agreed and noted that she had little input in the excess facilities report and that the information used was gathered by a predetermined criteria. She reiterated that this was not their decision-making tool at the Sites for prioritizing work. Determining prioritization is ongoing and many factors contribute including the new Administration.

Ms. Kim Kearfott noted that it is important to consider how the budget will create jobs as well. There is a major opportunity to hire young people to continue the work and provide fresh and creative ideas.

Introduction of New Board Topics

Ms. Sue Cange introduced three new topics to be discussed: the establishment of a field-centric organization structure, the improvement of project management activities, and the establishment of an EM best practices database tool.

She recognized that progress has been made in the area of project management and stated that the goal is to develop a plan by the end of the year to improve project performance. Ms. Charboneau elaborated on the topic of field-centric organization and introduced the model of “assist and assess”. This means that DOE will assist the sites by providing the resources necessary to be successful and assess safety overnight to ensure QA standards are met.

The Chair opened the floor for discussion after summarizing some points from the days meeting.

Discussion

Dr. Huntoon applauded Ms. Charboneau for her focus on a field-centric structure. Ms. Jennifer McCloskey noted that there is a technical expert database proposed at DOE. Mr. Swindle noted that the best practices knowledge base should be a part of management activities.

Mr. Dabbar stated the importance of critiquing all projects, both successful and unsuccessful. Ms. Cange reminded the board that all three topics discussed do not need to be a priority; they are ideas meant to engage interest.

Mr. Thompson asked how to incentivize field managers to take larger risks that will make a difference in the organization. Ms. Charboneau responded that the most success will come from management that has field experience because they have both authority and accountability. HQ will need to be more lenient and provide the tools necessary for the appropriate risks to be taken. Ms. Price reinforced the need to minimize risk of mistakes.

Ms. Kearfott asked if there are any cross-agency efforts looking at the regulation of radiation associated with the sites. Ms. Charboneau stated that while individual agency regulations exist, perhaps overarching cross-agency regulations can be created in the future.

Mr. Timothy Runyon stated that he believes the field-centric structure is a good choice because the fields know the sites best and can make informed decisions.

Mr. Swindle summarized and closed the discussion.

Public Comment Period

Mr. Ralph Hutcheson of the Oak Ridge Environmental Peace Alliance stated that he believes the security requirements of an active site preclude responsible and affordable cleanup. Mr. Hutcheson believes that a field-centric model will help foster a sense of ownership and responsibility. He acknowledged the Y12 Plant’s new buildings for future uranium production and the budget pressures of the plant. He stated that he believes EM should reveal the cleanup

costs of a building during the budgeting phase and ensure that the users of the facility are aware of the eventual cleanup. He urged the EMAB to connect with public interest groups.

Ms. Jennifer McCloskey thanked Mr. Hutcheson for his insight.

Closing Remarks and Adjournment

Mr. Swindle provided some closing remarks and the meeting was adjourned at 3:22 pm.