

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

PUBLIC MEETING MINUTES

**Applied Research Center
301 Gateway Drive, Aiken, South Carolina 29803
May 11, 2016**

PROCEEDINGS

Ms. Kristen Ellis, the EMAB Designated Federal Officer called the Environmental Management Advisory Board meeting to order at 9:00 a.m. EST on Wednesday, May 11, 2016.

Board members present:

Mr. Sherrell R. Greene, Advanced Technology Insights, LLC
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
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
Ms. Shelley Wilson, SC DHEC, ECOS, NGA

Board members not present:

Mr. Paul Dabbar, J.P. Morgan Securities, Inc.
Mr. Josiah Pinkham, Nez Perce Tribe
Dr. Beverly Ramsey, Desert Research Institute
Adm. (Ret) Lenn Vincent, Defense Acquisition University

EMAB Designated Federal Officer:

Ms. Kristen Ellis, DOE-EM

Others present for all or part of the meeting:

Dr. Monica Regalbuto, Assistant Secretary for Environmental Management
Mr. Mark Whitney, Principal Deputy Assistant Secretary for Environmental Management
Ms. Betsy Connell, Senior Advisor, U.S. Department of Energy
Mr. Jack Craig, Manager, Savannah River Site
Mr. Harold Simon, Chair, Savannah River Site Citizens Advisory Board
Mr. Rick McLeod, Savannah River Site Community Reuse Organization
Ms. Mindy Metts, Savannah River Site Community Reuse Organization
Dr. Susan Winsor, Aiken Technical College
Dr. Joseph Newton, Augusta University
Ms. Carol Barry, Savannah River Nuclear Solutions
Mr. Larry Ling, Savannah River Remediation
Ms. Elizabeth Davison, DOE-EM
Ms. Alexandra Gilliland, DOE-EM
Mr. Jared Bierbach, e-Management

OPENING REMARKS

The Environmental Management Advisory Board (EMAB or Board) was convened at 9:00 a.m. ET on Wednesday, May 11, 2016, in Aiken, South Carolina, by EMAB Designated Federal Officer (DFO) Kristen Ellis. Ms. Ellis reviewed the meeting agenda and reminded EMAB members to recuse themselves from any discussion topic that presented a conflict of interest. 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>.

SAVANNAH RIVER SITE WELCOME

Mr. Jack Craig, Manager of the Savannah River Site (SRS), welcomed EMAB members and summarized recent activities at the site. EM is making significant progress toward opening the Salt Waste Processing Facility (SWPF) and ramping up operation of H Canyon. In addition, the Savannah River National Laboratory (SRNL), which serves as EM's corporate lab, continues to address site-wide, complex-wide, EM technical issues.

Mr. Harold Simon, Chair of the Savannah River Site Citizens Advisory Board (CAB) provided a brief overview of the EM Site-Specific Advisory Board (SSAB), which comprises eight local boards, including the one at SRS. Mr. Simon summarized recent SRS CAB activities, such as providing recommendations for site budget priorities and developing education and training initiatives.

EM PROGRAM UPDATE

Dr. Monica Regalbuto, Assistant Secretary for Environmental Management, welcomed the Board members and the members of the public to the meeting. She thanked the board members for the time and energy they have spent supporting EM's cleanup efforts.

Dr. Regalbuto outlined some of EM's major cleanup accomplishments over the past year, noting that EM received more than \$6 billion from Congress for Fiscal Year (FY) 2016.

Waste Isolation Pilot Plant (WIPP)

- EM is working toward resuming waste emplacement activities at WIPP.

Hanford

- EM continues to make progress on safely demolishing the Hanford Plutonium Finishing Plant (PFP), once the most dangerous building in the complex, to a slab-on-grade in FY 2017.
- The pencil-shaped processing tanks and gloveboxes were removed from the McCluskey Room.
- Two of the most contaminated pieces of process equipment were removed from PFP.

Savannah River Site

- EM is on track to complete construction of SWPF this year. Once in operation, the facility will significantly increase EM's ability to treat remaining tank waste at the site.
- EM is set to complete the closure of Tank 12, the eighth high-level waste tank to be closed at the site.

Oak Ridge

- EM is working to complete the demolition of K-27, the site's last gaseous diffusion enrichment process building. The completion of K-27's demolition will mark the first time that a gaseous diffusion enrichment site has been successfully decommissioned.

Dr. Regalbuto discussed the FY 2017 budget request. The \$6.1 billion budget request allows EM to maintain a safe and secure posture, while making substantial progress in cleanup. The FY 2017 request is the largest budget request in five years, signaling the importance of EM's mission. The request will allow EM to make significant progress in addressing high-level tank waste, EM's largest environmental risk. About forty percent of the entire request will go toward addressing tank waste at the Hanford, Savannah River and Idaho sites.

Additionally, the EM request includes: \$873 million for special nuclear materials and used nuclear fuel, a similar amount for facility deactivation and decommissioning, \$773 million for transuranic and solid waste, and \$445 million for soil and groundwater remediation.

EM work for FY17, includes:

- At the Hanford Office of River Protection, tank waste treatment through the Direct Feed Low Activity Waste Initiative
- At Hanford's Richland Operations Office, dry storage options for cesium and strontium capsules, and PFP closure activities
- At Idaho, liquid sodium bearing waste treatment through the Integrated Waste Treatment Unit
- At Los Alamos National Laboratory, addressing nitrate salt bearing waste and completing the investigation into hexavalent chromium contamination
- At Oak Ridge, K-27 demolition completion and design activities for the mercury treatment facility
- At SRS, processing 1.7 million gallons of high level tank waste, completing construction of the Saltstone Disposal Unit 6 (SDU-6), and commissioning and startup activities for SWPF
- At Portsmouth, deactivation activities and moving forward on the on-site waste disposal facility
- At Paducah, continuing the demolition phase of inactive site facilities
- At Nevada, remediation of contamination from the site's historic weapons testing mission.

Dr. Regalbuto addressed the future of the EM program, specifically in the areas of infrastructure, technology development, robotics, safety and the workforce of tomorrow. She noted that the budget request supports EM's desire to increase investments to support infrastructure needs across the complex.

EM's budget request will help prepare EM for the long-term by doubling the federal investment in technology development and deployment.

EM is rebalancing its technology program to ensure a focus on fundamental research, incremental technologies that improve existing cleanup approaches in the near term, and high impact technologies that target the grand challenges by addressing mission gaps and uncertainties.

Within this framework, EM will focus on cesium and strontium, mercury contamination, technetium management, radiological test beds, and robotics.

Dr. Regalbuto highlighted the work being done by SRNL. Their technical expertise supports strategic planning and technical program coordination across the complex. SRNL will continue to draw on the technical expertise throughout the Department, including the other national labs. SRNL brings innovative, practical approaches that reduce life-cycle costs to the Department's overall cleanup mission at all EM's sites.

In November, EM joined the National Robotics Initiative, run by the National Science Foundation (NSF). Ms. Regalbuto noted that by leveraging new developments in robotic technologies, EM may be able to enhance the safety of the workers and facilities. The "science of safety" approach will reduce risks to workers through technology.

EM must be proactive and creative in attracting, training and retaining a younger workforce. Many of EM's sites and contractors make contributions to STEM education initiatives in local cleanup communities. Collaborations with universities and colleges are a critical priority for EM.

Dr. Regalbuto concluded by noting that the federal investment in EM over the past 25 years has resulted in tangible progress and significantly reduced risks to the American people and to the environment.

Discussion

Mr. Sherrell Green asked if there were acceptance criteria that are applied before EM accepts facilities from other organizations.

Dr. Regalbuto responded that a facility must be left in a safe condition and EM must have a sufficient budget to clean up the facility prior to EM accepting it. Unfortunately, in some cases it's impossible to know the true condition of the facility, given that waste may have been buried there decades ago.

Mr. Mark Gilbertson, Deputy Assistant Secretary for Site Restoration, provided examples of Paducah requiring cleanup prior to D&D, as well as the Old Town facility at Berkeley, where Congress mandated acceptance. He also noted that Congressional language may mandate acceptance of all excess high-risk facilities to EM, no matter their condition. The Secretary and

the President have appealed the inclusion of such language. Mr. Gilbertson noted that EM has already received a large number of excess facilities.

Mr. David Swindle expressed approval of the budget increase for technology. He asked whether increases in budgets for research and development (R&D) are likely to continue.

Dr. Regalbuto noted that R&D investments are not necessarily in fundamental research alone, but can help solve environmental problems that exist today. A few years ago, the Secretary of Energy's Advisory Board (SEAB) conducted a study related to the proper funding of technology. EM endorses SEAB's recommendations, particularly in technology development, but understands there are budget constraints.

Dr. Regalbuto asked Ms. Ellis to provide the Board with copies of the study. She suggested that the technology development might be a topic at the next EMAB meeting.

Dr. Regalbuto noted that the need for technology development does not go away once a plant is up and running, especially with EM, where the waste being processed can change over time. EM must invest in technologies for existing facilities.

Mr. Swindle asked Dr. Regalbuto to comment on the Government Accountability Office's (GAO) list of worst performing programs in the federal government.

Dr. Regalbuto responded that management of facilities is a high-priority concern for Secretary Moniz, who has stood up a completely different structure for addressing facility management. Unfortunately, the facilities in the high-risk category pre-date the tenure of current DOE and EM management. And these facilities remain on the list. The goal is to balance the needs to bring facilities on line with the need to ensure safety.

Mr. Green asked whether the National Nuclear Security Administration (NNSA) is helping EM in shouldering the burden for managing the waste, given that NNSA sends wastes to EM.

Dr. Regalbuto explained that EM has a relationship with NNSA but that the majority of sites have an EM-specific missions. Some sites, such as Savannah River and Los Alamos have a mixed organization. There is a structure where there is a fee for processing material that comes from outside of the EM inventory. Some of the special nuclear materials are part of the EM inventory. The budget request includes approximately \$150 million for handling the special nuclear material which is coming from NNSA.

Ms. Karen Patterson opined that many of the issues facing EM are related to poor communication. She gave examples of lack of understanding of D&D, misinformation about radiation, and difficulty in reaching younger people. She asked whether EM needs to improve communication.

Dr. Regalbuto responded that EM is the most transparent organization within DOE and that citizen advisory boards and other communication venues are very effective. She recognized there may be an overall need to improve communication, because sometime the message doesn't

get through. The bottom line is that EM's interest is the same as the communities and the regulators. We all need to work together to achieve our shared objectives.

Mr. Tim Runyon acknowledged that communication is a difficult task and one that DOE could do better.

Dr. Regalbuto noted that one area that needs improvement is risk communication. To ultimately decrease risk at facilities, there is a need to temporarily increase risk during treatment. This has not been clearly communicated to stakeholders and the general public.

Dr. Kimberlee Kearfott praised the work of the EM SSAB in educating the community on complex, technical issues and thought that the boards could be an excellent source of collaboration with EMAB, especially with workforce issues.

Dr. Regalbuto agreed that this collaboration would be beneficial.

Mr. Green emphasized the need to celebrate EM successes, and encouraged EM to find ways of celebrating successes at all sites.

WORKFORCE PANEL: HOW TO ATTRACT AND RETAIN YOUNGER WORKERS

Mr. Rick McLeod, Executive Director of the Savannah River Site Community Reuse Organization (SRSCRO), gave a brief presentation before introducing the Workforce Panel. In 1993, there were 15 CROs across the county; now there are eight. These were set up by DOE to look at economic diversification across the complex as sites went through workforce transitions. At SRS, this was during the K-Reactor restart. At that time, SRS employed nearly 25,000 workers. It then reduced that figure to roughly 12,000 over the course of six years. The SRSCRO generally focuses on four sectors: Nuclear Manufacturing, Health, IT, and Cyber. It has managed a number of initiatives, including the Nuclear Workforce Initiative, which will be discussed in greater depth by the panel.

The SRSCRO estimates that there will be 37,000 job openings in the next five years. Eighty percent of those will be replacement jobs. The average age of a worker in the manufacturing sector is forty-eight. The largest portion of those jobs will be low-skilled jobs. Most of the workforce is mobile, which is why the CRO takes a regional approach.

Another unique aspect to the workforce is the construction occurring across the river from SRS. Plant Vogtle is building two new operating nuclear units, as well as a SCANA utility about 80 miles away from the site. Therefore, the workforce is really pooled on this region. The community has to find ways to attract millennials into the nuclear field.

Dr. Susan Winsor, President, Aiken Technical College

Dr. Winsor presented on workforce challenges and accomplishments at Aiken Technical College.

In 2008, the SRSCRO was aware that there were both opportunities and challenges facing the SRS region. The MOX project was coming on board, and Southern Company and SCANA had announced the addition of two reactors, one within visual distance of SRS and the other outside Columbia within commuting distance of the region.

At that time, the area was more focused on job creation. At the end of 2008, the SRSCRO Board approved the expenditure of an independent study, conducted by Booz Allen Hamilton, on job creation for regional nuclear employers.

The study showed a need for 10,000 new nuclear workers over the course of ten years. This involved eight different regional employers, two utilities and various nuclear contractors at the site. Based on the study, the SRSCRO Board formed the Nuclear Workforce Initiative Task Force.

Retirement curves are reaching critical levels, but thankfully the regional response has ensured that the area is well-equipped to handle the new job growth and replace workers across different job categories.

The nuclear industry workforce demand is going to continue. There is competition between the employers in the region, and demand for nuclear workers nationwide is high.

Retention is also an issue. The SRSCRO Board felt an obligation as leaders of the community to provide opportunities for young people, but only if they have the necessary skills to go into those jobs. They created the regional development of academic programs that resulted in a wide variety of programs being available within a 30 mile radius of the SRS site. The SRSCRO Board also considered that a locally developed workforce would be more stable because of their ties to the community. The structure of the Nuclear Workforce Initiative (NWI) is dependent on the intersection of nuclear employers working with the educational institutions and economic development entities.

Just over five years ago, NWI was able to pursue a grant through DOE. To fund the development of programs at local colleges. Through those grants, the Nuclear Quality Systems Associate Degree and Advanced Nuclear Applications for Nuclear Welding were developed at Aiken Technical College. A Chemical Technology and Nuclear Career Advisement Program was developed at Augusta Technical College, and Augusta University developed a nuclear track and a Chemistry and Physics program. The University of South Carolina Aiken developed a STEM Coursework Program for the USC Salkehatchie region, particularly helping young people to be interested in STEM fields. This whole process is managed by Mindy Mets, the NWI Program Manager. The colleges and universities work together to agree on what should be done. The workforce issue was a challenge too large for any single university, so it had to be divided. Preceding this grant, Aiken Technical College and Augusta Technical College had already developed radiation protection with the help of donations from the contractors. Augusta

Technical College created a Nuclear Engineering Technology Associate Degree, supported by Southern Company. In response to a recent need at the site, Aiken Technical College created the Nuclear Fundamentals Certificate. The first students are working through that now and will hopefully be hired by the site. The colleges continue to work and help students think about what path they want to take when getting their college degrees. It is important for colleges to get information out on job opportunities. There have been 821 students enrolled within the five colleges and over 3,800 students impacted by this program.

Mindy Mets, Program Manager, SRSCRO Nuclear Workforce Initiative.

Ms. Mets introduced a video on the Advancing Nuclear Skills Regionally (ANSR) grant. The SRSCRO uses the video for its teacher workshops that they participate in when they are trying to convey the career opportunities in the nuclear industry.

Dr. Joseph Newton, Assistant Professor of Nuclear Science, Augusta University

Dr. Newton presented on workforce challenges and accomplishments at his school. Augusta University developed a nuclear science concentration track for Chemistry and Physics students. Students usually start the nuclear science concentration track in their junior year, following the completion of their introduction classes.

The track consists of three courses: Introduction to Nuclear Science, Introduction to Nuclear Measurements, and Applications in Nuclear Science.

During these three courses students learn about radiation, nuclear reactions and how radiation interacts with basic nuclear components. They also learn how to build and use actual detection equipment. Students also learn about nuclear reactors and power generation. Nuclear medicine and radiation therapy issues are also discussed.

At graduation, students in the program will either receive a Bachelor's of Chemistry or Physics with a concentration in Nuclear Science.

Enrollment for the first introduction course was in the Fall of 2012. Since then, 82 students have gone through the first introduction course. Thirteen students have graduated from the program thus far and that number should double by the end of the summer. About 60% of the students are chemists, 40% are physicists.

Some of the graduates of the program are working at SRS, others are at Plant Vogtle. Ten students in the last three years have interned at SRNL. These internships help students gain real-life workforce experience that is crucial towards getting a job.

Many of the students that take Introduction to Nuclear Science are Nuclear Science Scholars, which are students that received scholarship funds to take this class. Several of these students are paying for college out of their own pocket, and trying to get them to stay an additional semester to do something different is virtually impossible. The scholarships allow them to stay another semester without having to work in some cases.

Rick McLeod, Executive Director, SRSCRO

DOE is looking at new contracts across the complex. During this process, the contractors and DOE are going to have to deal with recruitment, training and retention of millennials. There is nothing in the contracts that addresses this, so this is either going to have to be done by the new contractors coming in or in partnership with DOE providing non-mission dollars to look at workforce issues.

Mr. McLeod recommended that EMAB look at how DOE should improve training and how to keep workers at these jobs and moving forward, because it is a new workforce and a new culture. SRSCRO is working with EM and NNSA on the Workforce Opportunities and Regional Careers Grant, a one million dollar grant for five years to support.

Many interested students already have a college degree, but could not find a job, so went back to a technical school to get a two-year degree. These are not typically recent high school graduates.

In terms of marketing, each school has some funding, and the SRSCRO has money to start marketing the programs that were established under the first grant.

One area that the SRSCRO really needs to work on is internships. That will be the next phase the SRSCRO works on.

Carol Barry, Vice President for Workforce Services and Talent Management, Savannah River Nuclear Solutions (SRNS)

Ms. Barry presented on the SRNS workforce. SRNS currently has 5,177 employees at the site. Workforce management planning; in 2013, is a challenge, SRNS had a reduced work schedule and was planning for full furloughs.

Ms. Barry worked with the SRNS management team to write departmental Human Capital Management Plans to understand their workforce who are retirement eligible, what skill categories they have, in order to have better retention. One of things that helps is hiring new workers from parent companies that have a solid understanding of the work being done, so SRNS is working to take a more targeted approach to recruiting and hiring.

SRNS is working to fill attrition, and is not really creating new positions. They are mostly losing individuals to retirement, which is a shift from the last three years, where the average age of terminations was much lower. The average age of a worker right now is fifty, but Ms. Barry's goal is for the next year is a lower average age, which she thinks will happen.

Full retirement eligibility is a challenge. In FY 16, 25.7% of the SRNS workforce is eligible to retire with a full benefit and only 4.7% retired. She believes that some of the recent retirements may have been a result of the influx of new employees that were brought on to work for SRNS. Previously, folks did not want to leave because they did not want to leave anyone in the lurch, but now with new employees they feel better about leaving.

Another large part of Ms. Barry's organization is educational outreach. In a typical year, SRNS usually reaches over 20,000 students and teachers in the CSRA. The average age of workers that Ms. Barry is hiring is thirty-five, which is good news because SRNS has a gap there due to a hiring freeze during workforce restructuring efforts.

SRNS also has a growing internship program. There were seventy-nine requisitions representing 148 positions, and they are having great success in filling those. Internships are a great way to hire full-service employees.

Bucks Consultants has been working with SRNS on their pension program, to provide analysis of attrition statistics. Buck Consultants was able to break it down by gender, date of hire and actuarial work. Ms. Barry asked for the expected attrition by an organization, job family, and then by job family within an organization because that is important for each of the divisions to determine what their hiring will be.

A challenge is doing an analyses to understand where SRNS needs to submit requests for salary increase plans and retention pay programs for critical skills. Ms. Barry is very proud of the strides that have been made in engineering and science on the pay scale.

SRNS also has people development forums. There are mentoring circles, where each of the participants presents a topic. There are also field trips onsite, which is great way for folks to meet people who work in a different area. There are also leadership development workshops, which have received positive feedback.

There are also two organizations that are extremely active on the site. One is LEAP (Leaders Emerging Among Professionals) that is for newer employees, and the other is AMP (Advancing Midcareer Professionals), that is for employees who have worked there for seven to 20 years. SRNS is also working to develop a knowledge of transfer methodology. There was just a team at Oak Ridge recently to look at the program available there. Some of things that Oak Ridge has looked at are things that SRNS has already done to mitigate risk.

Larry Ling, Chief of Staff and Acting Director for Administrative Services, Savannah River Remediation (SRR)

Mr. Ling gave a brief presentation on SRR's workforce issues. Last year, SRR had about 120 people leave, and this year about 33 people have retired or been terminated. SRR hired 98 people last year, and hired 64 thus far this year. The majority of workers are age 51 to 60. Right now there are 669 people that could leave SRR with full or reduced benefits.

The HR challenges SRR faces include high attrition rates in specialized areas, an aging workforce, and recruiting and retaining younger workers. The critical skills areas SRR needs to focus on include Production Operators, RADCON Technicians, E&I Mechanics, Laboratory Technicians, and Engineers, all of which are consistent with the roles SRNS is seeking to fill as well. These skill areas are considered critical primarily from the standpoint that they are the highest-risk positions and have the longest lead time in terms of bringing qualified people on board and providing them with the on-the-job training they need to support SRR's mission. To

address these challenges, SRR is implementing an Attrition Management Strategy, wherein HR begins to hire individuals for those roles in anticipation of pending retirements; in 2016, there have been around 20 separations from those critical skills areas and nearly 30 offers made to begin backfilling. From January 2014 through December 2015, SRR had 103 new hires in the critical skills areas and about 64 terminations.

With regard to recruiting the next generation of workers, Mr. Ling reported that SRR has implemented an internship program that employs roughly 25 college interns. Unfortunately, the retention rate for the internship program is fairly low; only three or four are hired out of each class. SRR also recruits at military veteran job fairs and has a growing Veterans Apprentice program, which allows veterans to attend a local school like Aiken Technical College part-time and work part-time. SRR is working to adapt its recruitment strategies to attract millennials, but there are challenges. The area surrounding SRS has a lot to offer, but it's not a big city. It's also difficult to work on remote and secure job sites where cell phones aren't allowed.

SRR has found success with its engineering recruitment and retention prototype, which it would like to adapt to other business areas as well. The company has also established a program called the Reaching Engineers at the Developing Years (READY) Program for entry-level engineers, which offers job rotations across the site for two-three months at a time; training and development opportunities; support for advanced education; mentors and coaches; and networking opportunities to increase their visibility and interact with executive leadership. For mid-level employees, with 8-15 years' experience, there are opportunities to rotate them through other organizations and networking. Mr. Ling also cited SRR's Engineering Exchange Program with Washington River Protection Solutions and Savannah River National Laboratory, which promotes cross-complex learning. SRR hopes to build on the success of these programs and adapt them to other business areas.

Discussion

Mr. Swindle complimented the workforce panel. The availability of talent and a trained workforce is the most important aspect of workforce concerns. Mr. Swindle added that the presenters did not touch on the difficulties in obtaining security clearances for new workers.

Ms. Barry responded that security clearances are a challenge. They recognize that they need to work with DOE to come up with creative solutions. For example in the operator program, they are working on having potential workers apprentice, so that they can apply for clearance in that capacity. Security clearances are taking longer than in the past and that is one of the biggest challenges they have.

Mr. Ling responded that fortunately for the most part the workforce does not require a security clearance.

Dr. Winsor added that when they are recruiting students, they educate them on the impacts their behavior on future employment. One of the things that they did in their Radiation Protection Program was to require an internship as part of the graduation requirements. Those students

were already badged when they graduated and that was a huge advantage to the student and the employer.

Mr. McLeod added that reaching out to them at an early age on life's choices was an important aspect that often gets overlooked.

Ms. Lessie Price thanked the workforce panel for the presentations. She also applauded DOE for their efforts. She noted that local youth can be trained, but the key is keeping them in the area. There are great paying jobs in the area, but that is often not enough. This is key for elected leaders. Leaders need to create attractions for young people to keep them in the area. Mr. Craig is in contact with Aiken's new city manager helping him to understand what the site's needs are and how those needs can be addressed.

Mr. McLeod added that the site needs to give young people an internet-safe zone, and that is something that Mr. Craig is interested in bringing to the site. He added that DOE is going to have to look at the site and be innovative concerning the features that young people want to have at work.

Ms. Tracy Mustin added that there is a lot of information out there about what is important to millennials and the next generation. She added that there are perceptions that the sites are battling in their local communities and perhaps it is something that DOE and its contractors can continue to work on in the future. She suggested that a survey and the SRSCRO video be distributed in order to determine students' perceptions on the sites, and that may be able to help their marketing. She added that there are certain perceptions people have about working on the site and whether it is a stable place to work given work restructuring issues.

Ms. Barry added that the stability issue is a concern. In the past, Aiken Tech has had difficulties with commitments to hire because they were in the midst of difficult workforce restructuring. The marketing effort is really important and they have to work on projecting the positive. Ms. Barry is frustrated with the negativity surrounding Millennials. She believes that generations need to be discussed in a way that does not separate them. She added that the industry needs to be positive and that representatives need to go out and talk about the industry. The industry needs to keep improving infrastructure, despite the fact that budgeting makes these things difficult. As an example, Aiken Tech recently set up wellness rooms for mothers to nurse. These are the types of things that need to continue to be chipped away at to make strides. Mr. McLeod added that parenting is a big issue and how the industry reaches out to them. The Savannah River community is changing. There is a lot of community institutional knowledge leaving.

Dr. Regalbuto thanked the panel. She did highlight that the federal workforce was not described during this panel, which has significantly more challenges than the ones described during the panel. This is because there is a different rewarding structure. She asked that EMAB think about federal workforce issues, in addition to the private workforce issues. She also thanked EMAB again for their time and work.

Mr. Greene commented that when the panel was discussing after-employment training and educational support activities, no one discussed how the employer assists individuals that are hired with an Associate's degree. He continued by asking how those individuals are assisted in their educational advancement to a four-year degree after they are employed.

Ms. Barry responded that if they are interested that they have a tuition reimbursement program available for exempt and non-exempt workers.

Mr. Ling replied that they have the same reimbursement program, but the stipulation is that the degree has to apply to work on the site.

Mr. Greene added in that he does not believe that that opportunity is consistent across the complex and that is problematic. He then asked whether there is a venue within EM or across the DOE complex where contractors can get together and share best practices and lessons learned at the national level.

Mr. Ling responded that there is an organization called Energy Facility Contractors Operating Group (EFCOG) and there are a lot of working groups within that organization, and human resources is a part of that.

Ms. Barry added that within the laboratories that there is an organization that does the same thing.

Mr. McLeod added that there has been a push to have a workforce panel at the DOE Cleanup Workshop in September 2016.

Ms. Ellis added that EFCOG will be at the DOE Cleanup Workshop and perhaps she can take an action to look further into an EFCOG overlap to meet with EMAB on workforce issues.

EMAB RESTRUCTURING AND CHARGES TO THE BOARD

Mark Whitney, Principal Deputy Assistant Secretary for Environmental Management, joined the members to further discuss revising the structure of the Board and to identify topics for the Board's attention over the next few months. He began his remarks with comments on the contractor workforce presentation and noted that EM Headquarters (HQ) and the field sites are also facing challenges with succession planning, and attracting and retaining the next generation of federal employees. A significant portion of EM's federal workforce will be eligible to retire in the next three years. While there is the risk of losing those workers' knowledge and expertise, there is also an opportunity to reinvigorate the program. However, the situation is complicated by constrained Program Direction funding. EMAB's input on how to combat these challenges is welcome.

EMAB Restructuring

Moving forward, management would like to model EMAB after more of a Board of Directors than a committee charged with issuing written reports. Mr. Whitney and Dr. Regalbuto would like to elevate the level of the board's advice to be more strategic in nature, and have the members focus on the big picture challenges facing EM. Instead of providing a list of tasks for the Board to report on during its public meetings, management will raise a couple high-level issues, provide background information, and then discuss those issues with the members at their next meeting and solicit verbal feedback and counsel after the members have had time to consider the issues and look at them from all angles. The meeting discussions will involve more senior federal leadership.

September Meeting

EMAB's next meeting will be co-located with the EM Cleanup Workshop in September 2016. At that time, Mr. Whitney noted, he hopes to be able to discuss the pending EM HQ reorganization that is currently in development, along with other program updates including strategic planning documents, and EM's ongoing dialogue with the Environmental Protection Agency (EPA).

EMAB Topic Areas

Mr. Whitney and Dr. Regalbuto worked with senior HQ and field site leaders to identify issues that would benefit from EMAB's input. In addition to the topic of Workforce Development, which was covered earlier in the day, Mr. Whitney and Mr. Gilbertson discussed two additional focus areas: Critical Infrastructure and Excess Facilities.

- Critical Infrastructure

Over the past few years, EM has made investing in infrastructure a major component of the budget formulation process. In its FY 2017 request, EM asked for \$569 million across the complex for infrastructure needs, which is significantly more than previous requests. However, investing in infrastructure is complicated because the approach used in the past was very site specific – each site develops their own critical infrastructure needs lists a little bit differently. It's possible that a more integrated approach is needed to help balance requirements across the complex. EMAB's advice on this topic is appreciated. Mr. Whitney also mentioned EM's push to reduce or eliminate deferred maintenance projects, which is a separate topic, but related to critical infrastructure needs.

- Excess Facilities

DOE has over 2,300 excess facilities in need of disposition, 230 of which are considered high risk facilities. The majority of these facilities belong to EM, NNSA, the Office of Science, and the Office of Nuclear Energy. The estimated cost for D&D to eliminate the facilities is roughly \$30 billion; nearly 30% of that total cost is for the high risk facilities alone. Mr. Gilbertson has been working with other senior DOE leaders to develop an Excess Facilities Report that will be

released soon. The report will include an exhaustive list of the facilities and their status, and will outline some of the higher level approaches DOE could take as a Department to this issue as a whole. However, the report will not delve into how EM should approach the facilities, which is important since they may become EM's responsibility. This is a topic that would benefit from EMAB's advice. The goal of the report is to make the challenge of all these facilities in need of funded D&D more transparent so that DOE can act more strategically. Mr. Whitney and Mr. Gilbertson will provide EMAB with the report once it becomes available.

Discussion

Dr. Carolyn Huntoon asked if the facilities would likely be turned over to EM for D&D.

Mr. Whitney responded that some of those 2,300 facilities already belong to EM. For others, there is a process for EM to take ownership that includes the current landlord program deactivating the facilities to the extent they can and then transferring it to EM. The biggest challenge is ensuring there is funding available for receipt and D&D of these facilities.

Mr. Gilbertson provided more information on the status of DOE's excess facilities and explained that data on those facilities is collected through the Department's Facility Information Management System (FIMS). Annually, 20% of the data is validated by the sites, so that everything is validated in five year cycles. Each entry in FIMS has a name, number, and information on the gross square feet reported, type of construction, and status of the facility. The question of whether that data should be more standardized has been raised and does present a challenge. Mr. Gilbertson also noted that the 2,300 figure represents the current facilities that are excess, but there's another 1,000 facilities that will be declared excess over the next decade. So this challenge will continue to grow.

Mr. Whitney added that when EM presents its top near-term challenges to the next administration, during the coming transition, he sees a few high priorities: reopening WIPP and resuming operations; complex technical construction projects like WTP, IWTU, and SWPF; general life cycle budget issues; and these two topics of critical infrastructure needs and excess facilities.

Mr. Frazer Lockhart noted that the slide image EM uses to communicate how its budget is divided up gives the impression that D&D is on the decline. However, this topic of excess facilities infers that there is going to be a real uptick in D&D needs in the future, requiring increased funding. Mr. Whitney concurred and added that this is part of the challenge – EM will have a difficult time making the case for increased funding to accommodate facilities that are not currently in the program's portfolio. But those facilities will likely come to EM, and they will require more money.

Mr. Robert Thompson raised the issue of transferring assets to local communities and the private sector. There are a number of valuable assets and properties across the complex. Collecting an inventory of those excess facilities and properties is helpful, but understanding their value would be beneficial as well. Mr. Whitney clarified that the report is really focused on cataloguing the

excess facilities and especially the process contamination facilities that likely don't have much value for private entities.

Mr. Greene asked whether DOE had started to map the types of remediation and D&D challenges these facilities have with human capital and technology planning initiatives. Layering that information over the inventory data would better inform the decisions made on how to best tackle these projects. Mr. Gilbertson noted that the information about problem types, facility hazards, etc. is available. The data may not be consistent across sites, but each of the facilities is rated based on how it could impact the public, the workers, the environment, and the mission.

Ms. Shelly Wilson asked whether DOE had explored ways to share the cost of this work with other entities, perhaps by selling them off or sharing/leasing the facilities. For example, when DOD closed the Myrtle Beach Air Force Base under BRAC, they were very successful in turning over facilities for other uses. That may be an option for some of DOE's inventory.

Mr. Gilbertson noted that SRS is a good example of where DOE is sharing part of its property, specifically the National Guard's use of the site for training exercises. The Guard may provide some funding for infrastructure that it is shared, but not on the order of magnitude for what's needed. Mr. Whitney noted that based on his experience at Oak Ridge, the willingness of a private party to take ownership or make any type of investment in a facility that hasn't at least been decontaminated to an industrial standard is not great. The idea of reaching out to other government agencies, though, may be an opportunity worth further exploring.

Mr. Swindle shared a perspective from working with the UK Minister of Defense, which had an outside agency create a comprehensive standardized inventory of its sites to develop a comprehensive footprint reduction strategy. The agency also brought in some outside property development firms to provide advice on what sorts of redevelopment options were worth pursuing. Mr. Swindle also noted that from an accounting standpoint, declaring some of these excess facilities as unfunded liabilities has serious implications that could be leveraged in how GAO or OMB score them – unfunded liabilities could merit higher priority ranking.

Ms. Price emphasized the importance of developing relationships with Congressional appropriators. The better informed they are, the more likely they are to support these projects.

Mr. Runyon suggested that it may be helpful to develop some sort of matrix for discussions with Congress that includes the methodology for risk ranking as well as some of the more indirect impacts to the local communities. It's also important to look at the cost of not tackling some of these higher risk facilities sooner rather than later – perhaps there is some modeling capability that would be useful. He also asked whether there was an integrated project team working on these issues. Mr. Gilbertson responded that the Excess Facilities Report is a Departmental effort involving representatives from all the major program offices and some additional support from the national laboratories.

Dr. Kearfott asked about what appropriators and communities expected when talking about D&D – taking these facilities down completely? Or taking them to cold, dark, and dry? And what does that mean in terms of cost? Mr. Whitney noted that there are different approaches

available, but the Excess Facilities report does not get into that level of detail. The next step after completing the inventory and report, is to increase the fidelity of the data by doing more walk-throughs and evaluations.

Mr. Whitney summarized some of his takeaways from the EMAB discussion. Based on the members comments he agreed that standardizing the FIMS data and valuation approach for both critical infrastructure and excess facilities will be important going forward. Furthermore, the suggestions to look for creative ways to address excess facilities, besides D&D, and lessons learned from BRAC were useful. Lastly, some type of modeling capability that would allow DOE to plug in different environmental factors and funding scenarios would be very interesting and helpful in articulating the true costs of these facilities.

Public Comment Period

There was no response to the request for public comment.

Subcommittee Reports and Board Business

- Risk Subcommittee

Ms. Jane Hedges, Co-Chair of the EMAB Risk Communications Subcommittee, gave a brief update on the subcommittee's report on risk communication tools. At the EMAB meeting in September 2015, there were questions on the computerized tools. Ms. Hedges went back to the project manager and was able to address those concerns in the current subcommittee report. Ms. Ellis added that those members that were not present at the last meeting may abstain from voting.

Mr. Swindle asked whether the conclusion of this report would sunset this committee.

Ms. Ellis responded that many of the old ways of doing business in EMAB would be suspended in favor of the new EMAB structure.

Mr. Swindle moved for a vote on the report. Mr. Runyon seconded. The motion carried. Ms. Hedges, Dr. Huntoon, Mr. Thompson, Ms. Price, Mr. Swindle, Mr. Lockhart, Dr. Kearfott, Mr. Runyon approved moving it forward. Mr. Greene declined moving it forward. Ms. Mustin, Ms. Patterson and Ms. Wilson abstained.

- Public Meetings

Mr. Swindle moved to finalize the minutes from the September 2015 EMAB meeting. Ms. Hedges seconded the motion. Ms. Mustin, Ms. Patterson and Ms. Wilson abstained. The motion carried.

The next EMAB meeting will be held on September 16, 2016, in Alexandria, Virginia in conjunction with the annual DOE Cleanup Workshop scheduled for September 14-15, 2016. EMAB members are invited to participate.

- EMAB Structure

Dr. Huntoon commented that it seems EMAB's sole role is to review material when it is provided. She asked what the structure for the EMAB meeting will be in the fall.

Ms. Ellis responded that the DOE Cleanup Workshop will be two full days. Those two full days should provide an adequate EM program update. There will also be short subcommittee sessions incorporated into those two days. Following the workshop, there will be a full day for the EMAB meeting.

Dr. Huntoon responded that she thinks it is important that before the full day EMAB meeting they prepare for the conversation with the Assistant Secretary, so that EMAB members can have cohesive discussion.

Ms. Ellis responded that the full day EMAB meeting will have a session where there are clarifying questions and a presentation by subject matter experts on specific tasks. She thinks it makes sense for each subcommittee to meet and determine conclusions that they would like to take to the Assistant Secretary. Ms. Ellis proposed that EM could facilitate this type of conversation a week before the meeting.

Mr. Greene added that he has a bit of confusion concerning EMAB's structure. He said that the conversation he had with Mr. Whitney and Dr. Huntoon left a different impression than what he has heard from previous EMAB discussions.

Mr. Greene elaborated that it was his impression that Mr. Whitney did not want them to produce written reports. Second, Mr. Whitney did not see a standing subcommittee structure, but more a board working en masse in a responsive mode, as a Board of Directors, in which EM staff would bring, with DAS direct involvement, the issue of the day. The issues would change from meeting to meeting. Mr. Greene added that this differed from the structure they heard from Dr. Regalbuto, which seemed to have firm standing subcommittees.

Mr. Swindle added that there was one common element, and that Board should function as a Board of Directors, whether there are standing subcommittees or not. He thinks that a couple members should work on a terms of reference for at least the workforce issue and then come to the fall meeting and meet with additional experts on that topic so that the Board can be better informed externally and internally.

Ms. Ellis added that Mr. Whitney does not see the issues being the same every time the Board meets, and therefore standing subcommittees are unnecessary. She added that it is not necessary for all board members to be working on all four issues. These four issues are: 1) workforce, 2) EMAB restructuring, 3) excess facilities, and 4) critical infrastructure.

Ms. Ellis understood that there is some concern about the board restructuring issue when the Board is receiving conflicting messages from EM leadership.

Dr. Huntoon suggested tabling the restructuring issue. Ms. Ellis agreed that their resources should not be spent there.

Dr. Kearfott asked whether there is a committee on workforce and whether they should be writing a report. Ms. Ellis responded that there are no written reports.

Dr. Kearfott asked whether they should be writing recommendations. Ms. Ellis responded that at this point there were some members that volunteered to participate in the workforce subcommittee, including Mr. Dabbar, Ms. Price, Mr. Thompson, Dr. Kearfott, and Ms. Patterson.

There was also a phone call discussing restructuring, where Mr. Greene and Dr. Huntoon participated. Mr. Swindle may also be added to this subcommittee so that he can discuss other boards he has served on in the past.

Ms. Ellis asked who would like to participate on the infrastructure and excess facilities subcommittee. Mr. Runyon, Mr. Lockhart, Ms. Hedges, Dr. Huntoon, Ms. Wilson and Mr. Greene volunteered.

Ms. Ellis suggested that they have a pre-meeting before the full EMAB meeting for each subcommittee to update the full Board on what they have been looking at so that the full Board is more prepared for the public meeting the next day.

She added that as far as membership on a subcommittee, members are not required to be on a subcommittee, nor are they limited to one subcommittee. Ms. Ellis added that she will provide a contact sheet for all Board members and an outline of the various topics.