ENVIRONMENTAL MANAGEMENT SITE-SPECIFIC ADVISORY BOARD
CHAIRS' MEETING
for the
U.S. DEPARTMENT OF ENERGY

PUBLIC MEETING MINUTES

Las Vegas Marriott
325 Convention Center Drive Las Vegas, NV 89109
August 31-September 1, 2016

LIST OF ACRONYMS

ALARA – As Low As Reasonably Achievable
CAB – Citizens Advisory Board
CBFO – (DOE) Carlsbad Field Office (WIPP)
CD – Critical Decision
CR – Continuing Resolution
D&D – Decontamination & Decommissioning
DFO – Designated Federal Officer
DDFO – Deputy Designated Federal Officer
DOE – US Department of Energy
DWPF – Defense Waste Processing Facility
EA – Environmental Assessment
ETTP – East Tennessee Technology Park
EIS – Environmental Impact Statement
EM – DOE Office of Environmental Management
ERDF – Environmental Restoration Disposal Facility
EM SSAB – Environmental Management Site-Specific Advisory Board
EPA – US Environmental Protection Agency
FACA – Federal Advisory Committee Act
FY – Fiscal Year
GAO – Government Accountability Office
GTCC – Greater-Than-Class-C
HAB – Hanford Advisory Board
HAMMER – Volpentest Hazardous Materials Management and Emergency Response Federal Training Center
Hanford – (DOE) Hanford Site
HEPA – High Efficiency Particulate Air
HLW – High-Level Waste
HQ – DOE Headquarters Office
INL – Idaho National Laboratory
INL CAB – Idaho National Laboratory Site EM Citizens Advisory Board
IWTU – Integrated Waste Treatment Unit
LANL – Los Alamos National Laboratory
LAW – Low Activity Waste
LLW – Low-Level Waste
NASA – National Aeronautics and Space Administration
NEUP – Nuclear Energy University Program
NIH – National Institutes of Health
NMED – New Mexico Environment Department
NNMCAB – Northern New Mexico Citizens' Advisory Board
NNSA - National Nuclear Security Administration
NNSS – Nevada National Security Site
NRC - Nuclear Regulatory Commission
NSSAB – Nevada Site-Specific Advisory Board
OR – (DOE) Oak Ridge Site
ORP – (DOE) Office of River Protection (Hanford)
ORSSAB – Oak Ridge Site-Specific Advisory Board
Paducah – (DOE) Paducah Site
Paducah CAB – Paducah Citizens Advisory Board
PFP – Plutonium Finishing Plant
PORTS SSAB – Portsmouth Site-Specific Advisory Board
RCRA – Resource Conservation and Recovery Act
RL – (DOE) Richland (Hanford)
Portsmouth – (DOE) Portsmouth Site
SEAB – Secretary of Energy Advisory Board
SEP – Supplemental Environmental Project
SRS – (DOE) Savannah River Site
SRS CAB – Savannah River Site Citizens Advisory Board
SWPF – Solid Waste Processing Facility
TDP – Technology Development Program
TRU – Transuranic Waste
WIPP – Waste Isolation Pilot Plant
WIR – Waste Incidental to Reprocessing
WTP – Waste Treatment Plan

PARTICIPANTS

Hanford Advisory Board: Stephen Hudson, Chair; Susan Leckband, Vice Chair; Dawn MacDonald, Deputy Designated Federal Officer; Kyle Rankin, Deputy Designated Federal Officer; Kristen Holmes, Federal Coordinator; Dieter Bohrmann, staff; Jennifer Copeland, staff

Idaho National Laboratory Citizens Advisory Board: Herb Bohrer, Chair; Keith Branter, Vice Chair; Bob Pence, Federal Coordinator; Brad Bugger, Federal Coordinator; Jordan Davies, staff

Nevada Site-Specific Advisory Board: Donna Hruska, Chair; Janice Keiserman, Vice Chair; Steve Rosenbaum, Member; Kelly Snyder, Deputy Designated Federal Officer; Robert Boehlecke, EM Operations Manager; Scott Wade, Assistant Manager, Barbara Ulmer, staff; Carol Dinsman, staff; Cindy Lockwood, staff; Edward Rosemark, staff.

Northern New Mexico Citizens' Advisory Board: Doug Sayre, Chair; Gerard Martinez y Valencia, Vice-Chair, Ashley Sanderson, Member; Carlos Valdez, Member; Michael Gardipe, Deputy Designated Federal Officer; Menice Santisteven, staff; Bridget Maestas, staff.

Oak Ridge Site-Specific Advisory Board: Belinda Price, Chair; David Hemelright, Member; Melyssa Noe, Alternate Deputy Designated Federal Officer; Pete Osborne, staff; Ashley Huff, staff.

Paducah Citizens Advisory Board: Renie Barger, Chair; Michael Kemp, Vice-Chair; Judy Clayton, Member; Basil Drossos, Member; Bill Murphy, Member; Jennifer Woodard, Deputy Designated Federal Officer; Robert Smith, Federal Coordinator; Eric Roberts, staff; Yvette Cantrell, staff

Portsmouth Site-Specific Advisory Board: Bob Berry, Chair; Carlton Cave, Member; Greg Simonton, Federal Coordinator; Julie Galloway, staff

Savannah River Site Citizens Advisory Board: Harold Simon, Chair; Michael Mikolanis, Deputy Designated Federal Officer; de'Lisa Carrico, Federal Coordinator; Sonya Goinese, Staff

DOE Headquarters:
Monica Regalbuto, Assistant Secretary, Office of Environmental Management
Frank Marcinowski, Associate Principal Deputy Assistant Secretary for Regulatory & Policy Affairs
Connie Flohr, Deputy Assistant Secretary for Resource Management
Lois Jessup, Director, Office of Program Planning
David Borak, EM SSAB Designated Federal Officer
William Murphy, Contractor, e-Management, Inc.

MEETING MINUTES

The U.S. Department of Energy's (DOE) Office of Environmental Management (EM) Site-Specific Advisory Board (SSAB) Chairs and Vice-Chairs met on August 31-September 1, 2016, at the Las Vegas Marriott in Las Vegas, Nevada. Participants included EM SSAB officers and members, EM leadership, EM SSAB Deputy Designated Federal Officers (DDFO), Federal Coordinators and contractor support staff. The meeting was open to the public and conducted in accordance with the requirements of the Federal Advisory Committee Act (FACA).

Day One: Wednesday, August 31, 2016

Opening Remarks

David Borak, Designated Federal Officer (DFO) for the EM SSAB, called the Chairs Meeting to order at 8:30 a.m. EDT. Mr. Borak thanked the staff of the Nevada Site-Specific Advisory Board (NSSAB) and DOE Nevada National Security Site (NNSS) Office for hosting the meeting. EM SSAB representatives and all meeting attendees were introduced.

Eric Roberts, the meeting facilitator, reviewed the agenda and logistical details.

Scott Wade, EM Deputy Manager for the NNSS Office of Environmental Management, welcomed everyone and thanked them for their attendance.

Donna Hruska, the NSSAB Chair, welcomed the participants to the meeting and thanked Dr. Monica Regalbuto, Assistant Secretary for her attendance. She then thanked the local DOE officials, and the members of the Chairs Meeting Planning Committee.

EM Update

Dr. Monica Regalbuto, Assistant Secretary for Environmental Management, provided an EM program update.

Dr. Regalbuto thanked the chairs for their support to the EM program. She noted that this is an exciting time for EM, with significant progress. The EM program was fortunate to receive about $6 billion from Congress for FY2016, which allowed EM to tackle some of the current issues and also plan for the future.

<u>EM's Recent Successes</u>

Dr. Regalbuto emphasized that EM's progress was accompanied by maintaining a strong emphasis on safety and reduced risk to workers and communities. She noted that the EM SSAB represents the continuity of the EM program and that while contractors and federal staff come and go, communities remain. EM relies on the communities to continue to keep the EM program alive and well for future generations.

Dr. Regalbuto highlighted the successes at the Savannah River Site (SRS), including the completion of construction on the Salt Waste Processing Facility (SWPF). She said that earlier in her career she was involved in the development of the solvent extraction process that is being used now with SWPF. SRS also celebrated the 20th anniversary of the Defense Waste Processing Facility (DWPF) and EM recently produced its 4,000th glass canister, as well as completed its eighth tank closure at the site.

At Oak Ridge, demolition of K-27 facility was completed, so that makes it the first uranium enrichment gaseous diffusion plant to be demolished. Dr. Regalbuto said that EM established a Vision 2020 plan for completing the East Tennessee Technology Park.

At the Plutonium Finishing Plant (PFP) in Richland, EM continues to make deliberate, safe progress in completing the high risk projects and preparing PFP facilities for demo.

Some of the small buildings adjacent to PFP have been demolished, and this will allow EM to bring the heavy equipment and target the highest risk area. 70 out of 91 buildings have been demolished.

EM is continuing to work on the chromium plumes. EM celebrated 20 years of the Environmental Restoration Disposal Facility (ERDF); the ability to have this on-site disposal facility at Hanford is what allows EM to make progress.

At the Office of River Protection (ORP) there has been progress on the Low-Activity Waste (LAW) Facility, which is key to beginning vitrification of some Hanford tank waste as soon as 2022. The facility is close to being completed and two melters are being installed. After this the facility will go through a period of testing.

On a recent visit to Hanford, Dr. Regalbuto and the Secretary visited the tank farms, and looked at the AY-102 completion and the different technologies that are being used on the tank farm. They also visited the Volpentest Hazardous Materials Management and Emergency Response Federal Training Center (HAMMER), which is being merged with the National Training Center in Las Vegas and will become a joint effort supporting the whole DOE complex.

The EM Los Alamos Field Office was formed a year ago and we expect to double the size of the office from 21 to 41 Federal employees. Currently there is a bridge contract in effect dedicated specifically to the clean-up of legacy waste; in 2017, there will be a full contract, which will focus on the long-term mission for EM at the Los Alamos office.

The Waste Isolation Pilot Plant (WIPP) is in the process of cold operations and EM is preparing for the operation readiness review both from the contractor and from the DOE side; results of this review will determine EM's path forward. Additionally WIPP is getting an improved emergency management system. The backup emergency generator is operational and EM now has a digital system where they can track all workers as they are underground in real time.

WIPP is a very important facility for the entire complex, and needs sufficient funding so that it can serve all the sites properly. The more WIPP can maintain a high rating, the more the entire

EM program can offer a systems approach, which benefits everyone. Dr. Regalbuto lauded the work of the federal staff and contractors at Carlsbad and WIPP for the progress they have made.

In Idaho, EM continues to work on the Integrated Treatment Waste Unit (IWTU). Fluor is the new contractor as of June 2016 and EM is in the process of executing a four-phased approach with this facility. Currently, EM is evaluating all of the data that has been gathered in the past and the contractor requested to do an extent of condition by them and analysis is still underway.

At Portsmouth, EM completed the disposition of the High Enriched Uranium Fluoride Solids. The program also broke ground for an on-site permanent disposal, in preparation for the Decontamination & Decommissioning (D&D) of the gaseous diffusion in Portsmouth.

Returning to Oak Ridge, Dr. Regalbuto emphasized the knowledge that they gained doing the decommissioning of the gaseous diffusion plants, and how that knowledge transfers directly to Portsmouth and Paducah. At Paducah, the deactivation has been completed. She explained that the hardest work is not the demolition itself, but the preparation for demolition, such as the remediation of soils and plumes. Dr. Regalbuto said that this year EM removed from Paducah hundreds of thousands of gallons of lubricant oil from the sites's uranium enrichment buildings and thousands of miles of piping inside the buildings and approximately 265,000 gallons of the oil from tanks and supporting equipment in the large buildings.

Two years ago the Secretary of Energy re-emphasized the focus on technology development for EM to reinvigorate the program. EM has had the privilege of benefiting from the technological investments of the past, but in order to move forward, it needs to invest in more technology today. The Secretary commissioned the Secretary of Energy Advisory Board (SEAB) to take a look at the EM portfolio in terms of technology development, and as a result of this study, EM has reinvigorated our TD program and focusing on 1) investment in more fundamental research; 2) incremental technologies for modernization of the complex; and 3) looking at the long path and the long run for bringing down the remaining cost for EM.

Within this framework we are focusing on cesium, strontium, mercury, and technetium contamination management. EM is partnering with colleges and universities, as well as small businesses in the communities, and by doing so, EM is seeking to attract not only the next generation of workers, but also to give people the opportunity to come and test our products and build relationships with the National Labs or the sites.

Last November, EM had the opportunity to join the National Robotics Initiative. This initiative is hosted by the National Science Foundation (NSF). This is the first time NSF put out a call to the universities to provide work and research as it relates to EM's work.

EM has funded two trainerships in conjunction with our partners at the Office of Nuclear Energy through the Nuclear Energy University Program (NEUP) program. Dr. Regalbuto described the trainerships and how they will mutually benefit EM and the people coming through the program.

EM Reorganization

Dr. Regalbuto discussed the recent EM Headquarters (HQ) reorganization. She explained EM leadership wanted to make sure that the program was more field-centric and eliminated some of the duplicative processes. Also, the reorganization has clarified roles and responsibilities, and has established clear lines of authority and accountability.

EM has consolidated seven mission units and support offices into three offices. Stacy Charboneau serves as the Associate Principal Deputy Assistant Secretary for Field Operations. Under her organization, EM created a new set of positions called site liaisons, who allow us the opportunity to become more effective and efficient at addressing issues at the sites.

Ms. Charboneau's organization also includes EM's Technology Development Program (TDP), which is focused on developing game-changing technologies. EM has created a new Chief Engineering Office, this office is responsible for technical engineering support, guidance to major commissioning construction projects, and it allows EM to have a more corporate approach towards our Engineering Office. This office works closely with the Technology Development Office, and they coordinate with a number of other agencies.

Candice Trummell is the Associate Principal Deputy Assistant Secretary for Corporate Services, which oversees budgets, planning activities, workforce management, acquisition, project management, and communications. Frank Marcinowski is the Associate Principal Deputy Assistant Secretary for Regulatory and Policy Affairs. The goal of his organization is to promote a complex-wide policy integration and compliance in many areas, such as waste and material disposition, soil and groundwater, decommissioning activities, infrastructure and the like.

The EM SSAB and EM's other stakeholder programs fall under Mr. Marcinowski's portfolio, and are managed by the Office of Regulatory Intergovernmental & Stakeholders Affairs, which is led by Acting Director, Rob Seifert.

The Future of EM

Looking ahead, EM is very fortunate that this year its budget request is for $6.1 billion, and this will allow the program to maintain safe and secure postures at all of its different sites, a strong signal of the importance of EM's mission. This request allows EM to start looking at the higher risk activities. Dr. Regalbuto said that 40 percent of EM's budget goes to high-level tank waste, and they will continue to address the tank waste at Hanford, Savannah River, and Idaho. EM also has $873 million for special nuclear materials and used nuclear fuel, a similar amount for facility deactivation and decommissioning, $773 million for the transuranic and solid waste, and $445 million for soil and groundwater.

EM has created the Science of Safety initiative that is a worker-driven program in which EM is coordinating with the workers, unions, and National Labs, to modernize the workforce.

At the upcoming Cleanup Workshop in Washington, DC, EM will perform several demonstrations as part of this initiative. Recently, demonstrations were held at Portsmouth,

where there are a number of stakeholders and federal entities and through the Science of Safety initiative. EM is hoping this initiative will help improve operating conditions and reduce worker hazards.

Charges to the Chairs

Dr. Regalbuto then discussed the charges that have been given to the EM SSAB Chairs. For the first charge, EM asked for the Chairs' assistance in focusing on strategic planning and communications, and finding a better way for the EM story to be told. She discussed how failing to communicate EM's achievements have on communities and how people understand the program.

Dr. Regalbuto said she was pleased to see progress on the second charge – a white paper for the transition team. Finally, the third charge deals with issues relating to reuse and reindustrialization.

Discussion

Ms. Leckband emphasized that the EM SSABs really want EM to succeed and when we provide the kinds of advice that seems negative, it is always within the context that we want EM to be successful. At Hanford, the positive story doesn't always get out and there us a focus on the negative. But we absolutely believe in communication, and continue to focus on EM's success.

Mr. Hemelright suggested EM try and get spokespersons on Sunday news programs to spread EM's success stories.

Mr. Bohrer was interested in the Science of Safety initiative with respect to assistive technologies. He asked if the assistive technologies were applicable to individuals with physical limitations. Dr. Regalbuto agreed that the technologies can level the playing field and assist a wide variety of individuals. The initiative has been very rewarding because the number of agencies involved is significant, they include: the National Aeronautics and Space Administration (NASA) and the National Institutes of Health (NIH) are partnering with DOE.

Eric Roberts suggested that the Science of Safety might be a good topic for the spring 2017 chairs meeting in Portsmouth.

Gerard Martinez y Valencia said he works at Santa Fe Community College and they are launching a beta program with Los Alamos National Laboratory (LANL) on the hiring process, bringing in not only students but people from the community because we know that at least 30 percent of that workforce is going to be retiring next five years. We hope it works and think it would be great for the entire complex. But LANL is also coming in with these participants on how to navigate through the hiring process. And we're talking about the entry-level technician jobs that are available. We'll have some better results I think the end of October. Dr. Regalbuto noted that LANL is one of the first sites that is going through a big wave of retirement. She would be interested in hearing how the LANL project goes and what advice is forthcoming.

Presentations: Chairs Round Robin: Chairs' Site Reports

The Chairs shared current issues facing their sites, specifically the issues they would like the next administration to focus on.

Nevada Site-Specific Advisory Board (NSSAB) – Donna Hruska

The Nevada SSAB (NSSAB) believes it needs to increase outreach to communities surrounding the Nevada National Security Site (NNSS), which spans a distance of more than 300 miles. Emphasis should be placed on rural communities in Southern Nevada. To date, the NNSAB has conducted a number of outreach efforts to rural communities and has focused on a diversity of age groups, including students. One-half of the NSSAB currently represents the rural communities. Despite these outreach efforts, many community members are unaware of NSSAB and activities taking place at the site.

Much of the lack of information can be attributed to the security issues present during the Cold War. The long-term effect of not talking about what happened at the test site, however, has resulted in a void of information. The NSSAB believes a greater presence of current knowledge can fill this void.

NSSAB feels that DOE should have a bigger informational platform in Southern Nevada and more robust collaboration with the local communities. Specifically, the Board requests support and funding for community education in areas that focus on the principles of radiation, drinking water sources, and radioactive or biohazard signage; additional informational sessions and sources to rural communities; development of a computer model to measure the effects of groundwater contamination; effects of transportation of hazardous shipments; and expansion of student outreach. Ms. Hruska added that the reason for the groundwater computer modelling task was to provide assurance to communities that there are no groundwater issues at NNSS.

Hanford Advisory Board (HAB) – Steve Hudson

Mr. Hudson noted that the HAB has produced over 280 pieces of consensus advice and recommendations throughout its existence, and the HAB is necessary for DOE to continue its work at Hanford. The HAB provides a necessary service to the communities it represents and its advice draws upon a well-defined set of agreed-upon values and principles.

The HAB is convinced that the site completion date of 2075 is painfully accurate but probably too optimistic. The HAB is focused on adequate budgets, disposition of leaking tanks, groundwater contamination, and health and safety of all stakeholders. Mr. Hudson also discussed the word "cleanup," noting that for the general public, the word "cleanup" provides a promise: it tends to mean in a finite time, you are going to return this material to the state it was in. That is not true. Preferable words are waste management, risk management, disposition management, etc. Anytime an issue is raised at Hanford, there's a cacophony of voices that are raised in the media and in the blogosphere; it is almost impossible to select from that cacophony those voices that we should respond to and that we should rely upon to provide us with accurate

information. The result of this is a lack of trust in EM's information, especially when EM announces a delay, which is often part of the very nature of cleanup issues.

Ms. Hruska asked whether the HAB filters the cacophony of voices that you think are not representative of the community, or are they treated equally with all other voices? Mr. Hudson responded that these voices get treated equally with all the other voices. Often, people don't respond as appropriately as we perhaps should. Technology is giving people access to so much information, and what we need is a better base for reliability. Mr. Hudson believes people trust the HAB as a source of quality, responsible information because it has been so consistent in doing so.

Idaho National Laboratory Site EM Citizens Advisory Board (INL CAB) – Herb Bohrer

The over-riding priority for the INL CAB is the protection of the Snake River Aquifer. Other priorities include monitoring compliance with the Idaho Settlement Agreement and other cleanup and regulatory agreements; monitoring progress on long-term milestones such as spent fuel and high-level waste; ensuring adequate funding for site cleanup; and continuing to serve as a vital communication link between DOE and the citizens of Idaho. Near-term priorities include the IWTU start-up, the Advanced Mixed Waste Treatment Plant, WIPP, and buried waste retrieval.

Northern New Mexico Citizens' Advisory Board (NNM CAB) – Douglas Sayre and Gerard Martinez y Valencia

The transition to the new EM cleanup contract is going to take place in 2017. The Board is enthused that DOE started a new EM office in Los Alamos. The Board is also excited about the implementation of the new consent order, and commended the Los Alamos staff and the New Mexico Environment Department for their successful work, which involved citizen feedback from throughout the state.

The NNM CAB is also focused on groundwater cleanup. Specifically, Chromium-6 is moving away from the lab property towards the San Ildefonso Pueblo, and the lab is employing measures to stem that movement. The Board is also awaiting the reopening of WIPP and the resumption of Transuranic (TRU) shipments from LANL. The Board is also concerned about monitoring and controlling surface water runoff. There was a life-cycle benefit evaluation on some of the cleanup at Los Alamos which was estimated at 20 years and $3.2 billion, which estimates a relatively short period to complete cleanup.

Oak Ridge Site-Specific Advisory Board (ORSSAB) – Belinda Price

The ORSSAB is focused on four areas. First, the Board supports off-site groundwater monitoring at the Oak Ridge facility, including examining potential offsite plume pathways. The second area is ensuring future waste disposal capacity, including planning for sufficient capacity at the proposed new on-site disposal facility, ensuring adequate funding, and establishing a trust fund for long-term stewardship of those disposal facilities. The third area is engaging community perspectives by informing the public through outreach, including involving more communities in decision making, and reaching out to outlying disaffected and disadvantaged

communities. The final area of interest is addressing mercury cleanup in the East Fork Poplar Creek.

Paducah Citizens Advisory Board (Paducah CAB) – Renie Barger

The key issue for Paducah is remediating the source of the largest off-site trichloroethene (TCE) groundwater plume in the DOE complex. Earlier cleaning techniques that were required to maintain and efficiently run the massive motors and pumps and condensers within the Gaseous Diffusion Plant leaked into the local aquifer. Hundreds if not thousands of gallons of a carcinogenic liquid is now underground in a very mobile aquifer, affecting recreational areas, residents, farmlands, and businesses. It is the largest environmental issue at the Paducah site. Electrical resistance heating and steam injection have proven effective in remediating the source, but a large portion of the source appears to be under the C-400 maintenance building. In order to completely remediate the source, some type of remediation needs to take place under the building's footprint. Sampling and analysis are currently underway. The Paducah CAB is also recommending adequate funding to remediate the TCE and deactivate the Gaseous Diffusion Plant in a safe and timely manner.

In summary, the community and the CAB have asked for stable employment, along with the funding to begin the accelerated approach on groundwater under and around the C-400 building, while safely deactivating the Gaseous Diffusion Plant.

Portsmouth Site-Specific Advisory Board (PORTS SSAB) – Bob Berry

The PORTS SSAB is focused on maintaining cleanup momentum and optimizing the ability for site reindustrialization. The Portsmouth site is probably the least contaminated site among the EM SSAB sites. It does not require new technology for cleanup and there is little danger of contaminated groundwater migration. The community overwhelmingly wants the site to be reindustrialized. It may be possible to remediate practically the entire site in 12 years at a cost of $425M per year, including $25M per year for the off-site disposal cell. For Portsmouth, the major issue is simply funding.

The Board is also interested in obtaining ample appropriated funding to wean the site off the uranium barter program and maintaining a skilled workforce to accomplish all cleanup goals safely.

Savannah River Site Citizens Advisory Board (SRS CAB) – Harold Simon

The SRS CAB has two main priorities: keeping a vibrant workforce and funding for risk reduction activities at SRS.

By FY 2021, more than 50% of SRS employees will be eligible for retirement. DOE and its contractors have performed workforce planning activities to understand the current and forecasted composition of their workforce and to develop action plans to address the gaps and issues they're facing in the future. SRS needs a vibrant workforce to meet the challenges ahead. Mr. Simon expressed agreement with Dr. Regalbuto’s charge to the EM SSAB in attracting the

next generation workforce, summarizing initiatives at the college/university level related to nuclear technology. He also noted the importance of community outreach and involvement and the value of community reuse initiatives.

In the area of risk reduction at SRS, the CAB requests that DOE continue to fund tank waste, spent nuclear fuel and plutonium disposition activities, and soil and groundwater remediation.

Dr. Regalbuto thanked the Chairs for their reports and pledged to take their input back to HQ.

Waste Isolation Pilot Plant (WIPP) Status Update

Mr. Frank Marcinowski, Associate Principal Deputy Assistant Secretary for Regulatory & Policy Affairs, gave an update on WIPP recovery and the status of the site.

Path to Resumption of Waste Emplacement

A revised DSA (Documented Safety Analysis) (Rev. 5) was approved on April 29, 2016. This was developed under the new DOE Standard 3000-2014, which significantly updated DSA requirements based on experiences and lessons learned from the WIPP incident. There have been approximately 120 Safety Management Program procedures created and/or revised and the implementation of these was declared complete on May 29, 2016.

Cold Operations began at WIPP on June 1, 2016, whereby WIPP crews successfully processed and downloaded empty waste containers using new DSA Rev. 5 controls. The regular drills were conducted to test safety management procedures and they will continue to improve procedures to make the process more efficient and the expected completion for this is August 31, 2016.

An internal review was conducted by the WIPP Management & Operations contractor Nuclear Waste Partnership (NWP) to confirm operational readiness. Additionally, a Management Self-Assessment was conducted this past August, and included a list of corrective actions. With this assessment, performance is based on examinations of facilities, equipment, procedures, and personnel.

Starting October 1, 2016 Contractor and DOE Operational Readiness Reviews (ORR) will begin. This 4-6 week process will conduct performance-based examinations of facilities, equipment, personnel, and procedures as they relate to operational readiness. This process will ensure that WIPP can be operated within an approved safety envelope.

There has been progress on Supplemental Environmental Projects being conducted at the site. The WIPP north access road-phase 1 project has been completed. This main road is approximately 12-13 miles and was previously in pretty bad shape. In the FY17 request there is money identified to continue fixing some of the smaller road projects related to WIPP. An emergency operations center has been established and regional mine rescue teams have been given additional training and equipment. The WIPP Mine Rescue Teams showed their expertise this past spring and summer and won honors at both regional and national competitions.

Schedule and Challenges

Contractors at the DOE Carlsbad Field Office (CBFO) and NWP are working hard to resume waste emplacement operations at WIPP. They are currently addressing some challenging non-critical path items such as ground control issues, ongoing maintenance, and mine safety issues. Approximately 4,000 bolts have been replaced at the site. Mr. Marcinowski explained that there are still places within the underground where there will still need some additional maintenance and crews are working hard to catch up on this. He explained that the Mine Safety and Health Administration (MSHA) goes down to the site and does routine inspections. They are required to go down quarterly and sometimes go more often. He said that DOE is working close with the MSHA to make sure that any mining safety issues are addressed. Mr. Marcinowski explained the ventilation system and focused on the Interim Ventilation Systems (IVS), where a contractor management self-assessment was performed and a contractor operational readiness review identified several weaknesses. DOE has subsequently concluded its readiness assessment for IVS and one finding as well as two post-start items have been identified. Currently WIPP has a 4 year capacity for waste acceptance and will have a new ventilation system installed by 2021.

Changes to the National TRU Program

Mr. Marcinowski went over the generator site packaging issue and how the generator sites are building up a backlog of generated waste at their sites. There are several new and enhanced oversight measures of Federal and Contractor activities with regard to the TRU program. Specifically there is now increased oversight of the TRU program by the CBFO and EM-HQ. These additional layers of oversight ensure good management of the program. Also, roles and responsibilities have been clarified and defined. Through this a new National TRU Program Oversight office has been created at EM-HQ and CBFO has been reorganized to separate oversight and operations functions. Mr. Marcinowski also stated that due to the maximum of five shipments to WIPP they are working to equitably distribute shipments among the various generator sites.

Mr. Marcinowski went over some of the new Waste Acceptance Criteria (WAC) changes.

- The WAC revision 8 was issued on June 27, 2016
- It includes changes resulting from findings from the Accident Investigation Board (AIB) Phase 2 report on the radiological release.
- The revision incorporates requirements from recently approved DSA Rev. 5 and chemical compatibility studies.
- The revised WAC was went into effect on July 5, 2016 and on that date, site certification programs were suspended. These programs will need to be re-certified to resume operations going forward.
- All previously certified waste will need to be confirmed in order to meet the new WAC

Some other improvements to the TRU program include an enhanced acceptable knowledge which includes a detailed re-review of source documentation for potentially incompatible materials and to ensure an adequate information basis. Also new chemical compatibility evaluations will help in identifying the range of possible chemical combinations that could occur

in each waste stream using the EPA-approved methodology. This will compare all chemicals and materials in the waste to better identify incompatibilities.

Mr. Marcinowski discussed the basis of knowledge for oxidizing chemicals. He explained that waste characterization programs must ensure that appropriate measures are taken to identify and treat waste to avoid potential effects from oxidizing chemicals. He said that this needs to be based on actual testing, specific tests conducted to better understand reactions, and should provide recipes for resolution.

Mr. Marcinowski said that Generator Site Technical Reviews (GSTR) will be performed by CBFO and NWP to ensure that waste packaging and treatment activities meet these requirements for shipment to WIPP. Mr. Marcinowski again mentioned the significant backlog at sites, specifically at Idaho National Laboratory. Additionally a new verification is in place that generator site controls and waste information meets new enhanced WIPP WAC compliance. He said that GSTR must be completed to ship waste, including any previously certified waste verified to comply with new WIPP WAC. An additional quality assurance review must be completed to approve updated programs and allow site certification activities to resume for new waste.

Path Forward

Mr. Marcinowski explained that EM is striving towards resumption of waste emplacement at WIPP and they are working with the DOE sites to have certified waste ready for shipment to the facility. Also critical is the work creating the permanent ventilation system for the site. This capital project includes:

- The new shaft and 55,000 sq. ft. ventilation building will be located east of the existing exhaust shaft
- A Geotechnical Analysis is underway and consists of drilling multiple boreholes to various depths
- Data will be used to determine bearing capacity, seismic design parameters, and building foundation design
- This system will provide enough airflow underground for mining and waste emplacement activities to occur concurrently

Discussion

Ms. Leckband asked if WIPP has enough capacity to accommodate Hanford since that site is far down the line to begin shipment to the facility. Mr. Marcinowski responded that the 2030 original planning date was likely to be extended until 2050 and that DOE has sufficient capacity to accept the waste.

Mr. Hemelright asked how many number of drums were in each shipment. Mr. Marcinowski said that it depends, but that they have 25,000 container which contain various number of drums per shipment. Ms. Hruska asked whether the chemical compatibility evaluations were computerized. Mr. Marcinowski reponsed that they were not yet computerized.

Mr. Hemelright asked what the status of the plan to store waste above ground at WIPP was. Mr. Marcinowski replied that EM was moving forward with that and that they were working with the State of New Mexico on it.

Waste Disposition Update

Mr. Marcinowski's presentation focused on four areas: low-level radioactive waste (LLW) policy and highlights, status of greater-than-Class C (GTCC) LLW and GTCC-like waste disposal, depleted uranium update, and packaging and transportation update.

He noted that under the reorganization he has responsibility for the regulatory and policy office, while basically retaining all the waste issues, such as low-level, the transuranic, the mixed low level, the high-level spent fuel, and GTCC, and the packaging and transportation as well. In addition, DOE 435.1, the Waste Management Policy Order, is retained within his office. Changes to 435.1 are in the works, especially with regard to high-level waste and spent nuclear fuel. Currently, definitions and information are outdated.

Low-Level Waste Policy and Highlights

Mr. Marcinowski summarized LLW highlights from multiple sites. NNSS is moving forward with a new mixed low-level waste cell; the existing cell is reaching its design capacity. EM continues to work with the State of Nevada through a memorandum of understanding. EM is also continuing to work on on-site disposal facilities at three former gaseous diffusion plants. At the West Valley Demonstration Project, EM has three large vessels that have been packaged and ready for shipment to Waste Control Specialists in Texas. At Moab, EM has passed the 50% mark in relocating uranium mill tailings to the Crescent Junction, Utah, disposal cell.

Mr. Marcinowski then showed a chart summarized expected low-level waste disposal rates across the complex, noting that 90 percent of the waste generated through D&D activities remains on the site where it's generated. About 10 percent goes off-site either to NNSS or to a commercial disposal facility. EM continues to see lower trends in low-level waste generation. Currently and in FY 18, the largest generators are Portsmouth and Paducah.

Greater Than Class C

Greater Than Class C is a small volume of waste that's spread across the complex, but that's never had a disposal path before. The Environmental Impact Statement (EIS) which was published in February 2016 identified three primary sources: sealed sources, non-defense TRU waste, and activated components mainly from reactors. A single solution for all three of those waste streams is not feasible. The EIS identified a couple potential disposal routes. One is commercial disposal at a still undetermined facility in the South Central part of the country. WIPP was also identified as a potential location because there's actually no difference between non-defense transuranic and defense transuranic. To use WIPP, EM would need legislative changes to allow non-defense TRU to go there.

In accordance with the Energy Policy Act of 2005, DOE must receive direction from Congress before deciding on disposal alternatives. DOE will also need input from the NRC for a commercial facility to accept some of this GTCC waste. The process involves submitting a

report to Congress, obtaining Congressional input, then issuing a Record of Decision. Mr. Marcinowski believes the process will be along the lines of the preferred alternatives that we identified in our final EIS.

Depleted Uranium

There is a large amount of waste coming out of the conversion facilities at Portsmouth and Paducah that currently does not have a disposal path. Recently, DOE issued a Notice of Intent to proceed with a Supplemental EIS that would further evaluate the potential disposal locations so that we can identify where this waste might be disposed. There were three potential facilities that were identified in that Notice of Intent: Energy Solutions in Utah, Waste Control Specialists in Texas, and NNSS in Nevada. The entire process is likely to take 1.5 – 2 years.

Packaging and Transportation

Turning to transportation, Mr. Marcinowski noted that EM completed nearly 17,000 shipments in FY 2015, most of which were LLW. He summarized annual shipment levels from FY 2004 - 2015, noting that the increase in shipments in FY 2015 is mostly due to finishing up the work. He also depicted primary waste shipment routes to Texas, Utah, and Nevada. In 2015, DOE did not have a single accident or incident on any roads in 17,000 shipments, covering 4.3 million miles, a safety record that is far superior to the commercial transportation sector. DOE's Transportation Emergency Preparedness Program provides assistance, equipment, and training e to local communities for emergency response capabilities. EM's overall goal is no reportable packaging and transportation incidents moving into the future.

Ms. Leckband asked if reclassification of waste would result in clearer safety remediation and/or disposition or a clearer path, or elimination of orphan waste streams.

Mr. Marcinowski replied it could be all of the above. The key is ensuring that each waste area is being managed in the most efficient, safest, and cost effective way.

Ms. Leckband asked about the status of a proposal by DOE to identify defense high-level waste disposal separate from commercial disposal. Where in the headquarters world is that discussion now?

Mr. Marcinowski responded that the repository program is managed by the DOE Office of Nuclear Energy (NE), not EM. NE has conducted meetings across the country about consent-based siting. There is continuing discussion about proceeding with a defense-only repository or a combined repository. NE will be issuing a report in the future.

Ms. Clayton asked about the nickel program. Mr. Marcinowski explained that although there has been industry interest, no companies have followed through. The holdup is EM does not have a buyer for the material. Mr. Berry asked if the nickel is not recycled, where will it be disposed? Mr. Marcinowski replied that he has not yet given up on recycling. It is premature to focus on disposal.

Day Two: Thursday, September 1, 2016

DOE HQ News & Views

Mr. Borak introduced Bill Murphy, a contractor with the EM SSAB program for more than 20 years.

Mr. Borak then discussed the upcoming presidential election and its impact on DOE and the EM office. He mentioned that it is still crucial for the EM SSABs to educate the new Administration on the work that the boards do. He said that the transition paper written by the EM SSAB will go a long way towards that end.

Mr. Borak went on to mention the reorganization that EM went through this past summer and said that it would not affect the boards much at all. He discussed the historical location of the office, which has resided in the communications office and regulatory office structures. Mr. Borak mentioned how the new structure which is paired within the regulatory structure will ultimately benefit the office and that they are looking forward to being within the new structure under the Acting Director Rob Seifert.

Mr. Borak brought up the upcoming 2017 business and charges for the chairs and boards. He mentioned that they were excited about the upcoming spring 2017 meeting which would take place in Paducah and thanked those that had volunteered to help with that meeting. Mr. Borak then announced that the following fall 2017 meeting would be held at Hanford. He said that like past meetings they would be need volunteers for the meeting planning and welcomed any volunteers that would be willing to work on this.

Finally, Mr. Borak brought up the work needed to be done for the next Chairs' meeting in Paducah. Mr. Borak suggested that the Chairs work in working group to tackle the communications charge they were tasked with as they did in crafting the transition document. He asked for any volunteers for the upcoming communications working group for the spring 2017 meeting.

Discussion

Mr. Hemelright asked if there EM was issuing the infographic cleanup number sheets as they had in the past. Mr. Borak recalled that the communications office had created those, but that they were difficult to keep up to date, due to the changing numbers of the EM cleanup work.

Mr. Borak, Ms. Leckband, and Mr. Bohrer then discussed issues relating to the cleanup numbers and how people need to be less afraid of less than positive numbers. They spoke of how those infographic have helped the boards in the past communicate the work being done by EM. Ms. Leckband and Mr. Hemelright mentioned how nice it was during the Recovery Act years that those numbers were easily communicated as they were mostly D&D. Mr. Borak mentioned that with liquid waste and tank waste that these are more difficult to quantify positively in numbers.

Budget Update and Strategic Communications Overview

Ms. Connie Flohr, Deputy Assistant Secretary for Resource Management spoke to the Chairs in a combined presentation regarding budget and planning. Ms. Flohr said that the FY17 request for EM was the highest request in some time and that it was due in large part to the budget and planning processes being integrated.

Ms. Flohr went over the budget timeline using a chart beginning in October 2016. She noted that the budget request of $6.1 billion was proposed February 2016. She said that the Senate and House markups of the budget both marked the EM budget higher than the request. Given the upcoming election, Ms. Flohr predicted that the program is likely to be operating under a continuing resolution (CR) and that EM has planned for a 3 month continuing resolution to go until December.

Ms. Flohr discussed the funding table and the various categories within them. She explained what each category was noting that "program direction" was the account that pays for federal salaries and benefits, travel, training and other related expenses.

Ms. Flohr discussed the budget request process as it relates to the election. She said that EM does not submit a budget to the outgoing Administration. She noted that they allow the incoming Administration to decide what request gets sent to congress. Ms. Flohr said that EM would be submitting a "continuing services budget" to OMB. This "continuing services budget" assumes that if EM continues the work it is doing what would that look like budget wise. Due to the nature of EM's work, Ms. Flohr explained why a "continuing services budget" is not ideal for EM. She explained that once the new Administration is known in mid-November EM will create a requirements-based estimate budget. This budget will reflect the policies of the incoming Administration. She also noted the time challenges associated with this request.

Ms. Flohr introduced Lois Jessup, the Director of Program Planning for EM. She said that Ms. Jessup is representing Ms. Flohr's team with regards to transition planning for the new Administration.

Discussion

Mr. Bill Murphy from the Paducah CAB asked Ms. Flohr to elaborate on what happens under a continuing resolution with regards to budget numbers. Ms. Flohr responded that it depends on the length of the CR and that she has been told to plan for at least three months. She noted that Congress may put a longer term CR in place to get the program past the election. A 45-day CR would get EM to the middle of November. Ms. Flohr predicted that congress would most likely give a CR that would extend until the end of December. Ms. Flohr said that typically when the CR passes it maintains the current year's enacted funding level. This funding is maintained throughout the sites and even within the sites at sublevel control points, with everything staying exactly the same as it was in 2016. Ms. Flohr continued to go over the CR enactment process noting the various challenges that EM and the Department face with this process.

<u>Strategic Planning</u>

Ms. Flohr discussed the charge that Mr. Mark Whitney gave the EM SSAB. He wanted the boards to help EM figure out how best to communicate the story of the EM program. Ms. Flohr

referenced the 17 corporate performance measures as a main way that EM communicates the successes of its program. She said that she thinks that Mr. Whitney would like the EM SSAB to come up with a less technical and more approachable way of sharing this information, especially to people on the Hill. Ms. Flohr said that one of the big drivers for EM's overall strategic planning effort is that the program has many things to balance at the same time, mainly risk, compliance requirements, the work itself, and requirements changes. She noted the work Mr. Whitney has done with regard to strategic planning for the program, citing specifically the ongoing interactions EM has with EPA and how best to communicate that EM cannot continue to fit more and more work under the same flat level of funding.

Ms. Flohr said that over the history of the EM program they have talked about footprint reduction, mortgage reduction, risk and compliance, all as ways to promote EM and the work they do. She also said how the direction and leaders at OMB can impact what they expect EM to focus on. Ms. Flohr said that the FY17 request was the first time EM developed a budget from a strategic plan. The plan came first and the budget came second. She spoke of how the higher level of funding that was given was a testament to this new effort.

Ms. Flohr brought up the group that Ms. Jessup is spearheading which has come up with the plan and how it is represented more by field staff than HQ staff. She described the working process that this group went through in order to craft the plan.

Ms. Jessup went over some of the various near-term planning activities and next steps for EM. She described how they were developing life-cycle planning profiles and were expanding EM HQ-field planning and strategic alternatives analysis. She noted an upcoming planning workshop which will be looking at much of this. Ms. Jessup said that they want to look at how best to promote the work EM is doing and why certain investments are needed. Ms. Flohr noted how EM started off the planning profiles in smaller increments such as five-years. Gradually working up to full life-cycle planning.

Ms. Flohr went over the corporate performance measures and how EM uses corporate performance metrics to track and communicate cleanup progress within each site's scope areas as well as for the EM complex as a whole.

EM's performance measures support important reporting requirements and provide a big picture view of progress. Ms. Flohr noted that they don't always tell the whole story, especially when a problem is spread over decades. To continue cleanup momentum it is essential to effectively articulate accomplishments. Working to communicate incremental progress in better ways that demonstrate: risk reduction, cost savings, and cleanup completion. She said that perhaps there should be a metric about bettering communities and the progress being done with regard to that.

Ms. Jessup said that her group is working on the lifecycle planning profiles and how best to evaluate new technical and regulatory approaches to solve the more intractable problems that EM faces. She mentioned again the work EM is doing working with EPA and the state regulators to come up with these new approaches. She said that they were also considering alternative end states, where appropriate. Ms. Jessup said how important it was for EM to build on past successes and to communicate this in a more effective way.

Mr. Borak said that Mr. Whitney was hoping for suggestions and progress on the charge by the next EM SSAB Chairs' meeting or possibly the meeting after that.

Discussion

Ms. Leckband wondered whether groups like the EM SSAB or other public groups would have any input into these priorities or plans being crafted by EM. Ms. Jessup responded that there should be and that the boards should be bringing these ideas up and they should be considered in crafting these planning profiles for each of the sites. Ms. Leckband asked about the compressed timeframe in budget planning due to the election and how this will impact the timeline process for how the boards become engaged in developing priorities and budget size for the boards. Ms. Flohr responded by going over the FY18 process and how the planning and budgeting process worked hand in hand for the past budget cycles. Ms. Flohr recommended that the EM SSAB recommendations could be year-specific which would fit with what EM is doing with strategic planning.

Mr. Bohrer asked if EM had considered whether it would be worthwhile to come up with a method of communicating the risk associated with meeting the targets set forth by the chart. Ms. Flohr agreed that was a good idea and noted how when working with Congress she has seen how difficult it is to communicate progress on a program the size of EM.

Ms. Leckband suggested that EM look at what kind of nomenclature and verbiage it uses to describe "cleanup". She noted that often times cleanup as a word gets misconstrued and that when cleanup is complete at a site, it doesn't necessarily mean what most people think. Ms. Flohr noted what EM had learned from site closings like Rocky Flats and how they changed terminology to better describe the situation at the site and what its status would be long term.

Ms. Leckband, Ms. Flohr, and Ms. Jessup discussed what the cost and work efforts with continuing surveillance and maintenance of sites would mean.

Ms. Price suggested that the chart with the corporate performance measures be edited to reflect the understanding that progress will be made when new technology is developed and that perhaps better clarifying this will help others understand the information. Ms. Flohr said that she understood what Ms. Price was suggesting and that it was difficult when one of your largest expenditures was almost $600 million dollars for SRS' tank waste program. And that this was a line on that chart that wasn't moving. Ms. Flohr followed up by saying that she thinks that Mr. Whitney is asking for help communicating these things with more salient measures that people would better understand why it's important to fund these programs.

Mr. Hudson and Ms. Flohr discussed how information is released to the public and how the media and social media are impacting these. Ms. Flohr noted that perhaps EM could provide the boards with some guidance on what proper media outlets are and how best to communicate.

Public Comment

There was no public comment.

Product Development: Discussion of Recommendations from the EM SSAB Chairs

Mr. Roberts began the discussion and opened the floor up to ideas for refining the recommendation.

The Chairs marked up the recommendation for final draft and made several semantic and structural revisions.

Mr. Borak said that updated copies of this recommendation would be formatted and sent out to the boards.

Closing remarks and adjournment

Ms. Donna Hruska gave closing remarks to the Chairs and thanked everyone for coming to Nevada.

Mr. Borak thanked the Chairs and EM SSAB staff for their participation in the meeting. The meeting was adjourned at 12:30 p.m. EST.