

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

**PUBLIC MEETING MINUTES**

**Red Lion Hotel Pasco  
2525 North 20<sup>th</sup> Avenue Pasco, WA 99301  
April 23-24, 2014**

## LIST OF ACRONYMS

AMWTP – Advanced Mixed Waste Treatment Project	NMED - New Mexico Environment Department
ARP – Accelerator Retrieval Project	NNMCAB – Northern New Mexico Citizens’ Advisory Board
CAB – Citizens Advisory Board	NNSA - National Nuclear Security Administration
CEUSP - Consolidated Edison Uranium Solidification Project	NNSS – Nevada National Security Site
CH-TRU - Contract-Handled Transuranic Waste	NRC - Nuclear Regulatory Commission
D&D – Decontamination & Decommissioning	NSSAB – Nevada Site-Specific Advisory Board
DDFO – Deputy Designated Federal Officer	OR – (DOE) Oak Ridge Site
DOE – Department of Energy	ORP- Office of River Protection
DUF6 – Depleted Uranium Hexafluoride	ORSSAB – Oak Ridge Site-Specific Advisory Board
EM – DOE Office of Environmental Management	Paducah – (DOE) Paducah Site
EM SSAB –Environmental Management Site-Specific Advisory Board	Paducah CAB – Paducah Citizens Advisory Board
EPA – Environmental Protection Agency	PFP - Plutonium Finishing Plant
ERDF - Environmental Restoration Disposal Facility	PNNL – Pacific Northwest National Laboratory
FTE - Full-Time Equivalents	PHOENIX - PNNL Hanford Online Environmental Information Exchange
FY – Fiscal Year	PORTS SSAB – Portsmouth Site-Specific Advisory Board
GDP- Gaseous Diffusion Plant	Portsmouth – (DOE) Portsmouth Site
GIS - Geographic Information System	SNF – Spent Nuclear Fuel
GTCC – Greater-Than-Class-C	SPRU - Separations Process Research Unit
HAB – Hanford Advisory Board	SRS – (DOE) Savannah River Site
Hanford – (DOE) Hanford Site	SRS CAB – Savannah River Site Citizens Advisory Board
HEPA- High-Efficiency Particulate Air	TWINS - Tank Waste Information Network System
HLW – High-Level Waste	TRU – Transuranic Waste
HQ – DOE Headquarters Office	USGS - U.S. Geological Survey
INL – Idaho National Laboratory	WCS – Waste Control Specialists
INL CAB – Idaho National Laboratory Site EM Citizens Advisory Board	WIMS – Waste Information Management System
ISMS - Integrated Safety Management System	WIPP – Waste Isolation Pilot Plant
IWTU – Integrated Waste Treatment Unit	WIR – Waste Incidental to Reprocessing
LANL – Los Alamos National Laboratory	WTP – Waste Treatment Plant
LAW- Low-Activity Waste	
LLW – Low-Level Waste	
MLLW – Mixed Low-Level Waste	

## PARTICIPANTS

Hanford Advisory Board: Stephen Hudson, Chair; Susan Leckband, Vice Chair; Shelley Cimon, Member; Kim Ballinger, Federal Coordinator; Sharon Braswell, Contractor Support Staff; Kristen Skopeck, Federal Staff

Idaho National Laboratory Citizens Advisory Board: Herb Bohrer, Chair; Harry Griffith, Vice Chair; Bob Pence, Federal Coordinator; Jim Cooper, Deputy Designated Federal Officer

Nevada Site-Specific Advisory Board: Kathleen Bienenstein, Chair; Donna Hruska, Vice Chair; Kelly Snyder, Deputy Designated Federal Officer ; Barbara Ulmer, Bridget Maestas, Contractor Support Staff

Northern New Mexico Citizens' Advisory Board: Carlos Valdez, Chair; Doug Sayre, Vice Chair; Allison Majure, Member; Lee Bishop, Deputy Designated Federal Officer; Christina Houston, Alternate Deputy Designated Federal Officer; Menice Santistevan, Contractor Support Staff

Oak Ridge Site-Specific Advisory Board: David Hemelright, Chair; Bruce Hicks, Vice Chair; Alfreda Cook, Corkie Staley, Robert Hatcher, Members; David Adler, Alternate Deputy Designated Federal Officer; Pete Osborne, Contractor Support Staff

Paducah Citizens Advisory Board: Ben Peterson, Chair, Judy Clayton, Member; Robert Smith, Federal Coordinator; Eric Roberts, Contractor Support Staff

Portsmouth Site-Specific Advisory Board: Val Francis, Vice Chair; Sharon Manson, Member; Joel Bradburne, Deputy Designated Federal Officer; Julie Galloway, Rick Greene, Contractor Support Staff

Savannah River Site Citizens Advisory Board: Marolyn Parson, Chair; Harold Simon, Vice Chair; Gerri Flemming, Federal Coordinator; Ashley Whitaker, Contractor Support Staff

### DOE Headquarters:

Jack Craig, Associate Principal Deputy Assistant Secretary for DOE EM  
 Frank Marcinowski, Associate Deputy Assistant Secretary, Office of Waste Management  
 David Borak, EM SSAB Designated Federal Officer  
 Tim Boulay, Senior Communications Advisor, Office of Communications  
 Elizabeth Schmitt, Office of Intergovernmental and Community Activities  
 Alexandra Gilliland, e-Management  
 Sayoh Mansaray, e-Management

### Others:

Matt McCormick, Richland Operations Manager, Hanford  
 J.D. Dowell, Deputy Manager, Office of River Protection  
 Jane Hedges, Program Manager for the Washington State Department of Ecology  
 Mr. Dennis Faulk, Program Manager for the U.S. Environmental Protection Agency  
 Mark Triplett, Pacific Northwest National Laboratory

D.J. Watson, Pacific Northwest National Laboratory

## MEETING MINUTES

The U.S. Department of Energy's (DOE) Office of Environmental Management (EM) Site-Specific Advisory Board (SSAB) met on Wednesday, April 23, 2014, and Thursday, April 24, 2014, at the Red Lion Hotel in Pasco, Washington. Participants included EM SSAB officers and members, DOE staff, 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.

### **Day One: Wednesday, April 23, 2014**

#### **Opening Remarks**

Mr. David Borak, Designated Federal Officer for the EM SSAB, called the Chairs Meeting to order at 8:00 a.m. PDT. EM SSAB representatives and all meeting attendees were introduced. Mr. Eric Roberts, the meeting facilitator, reviewed the agenda and logistical details.

Mr. Matt McCormick, the Richland Operations Manager for the Hanford Site, welcomed meeting attendees and acknowledged the hard work and effort that went into planning the meeting. Mr. McCormick gave a brief overview of the Richland Operations Office, which manages cleanup, utilities, emergency services and security at Hanford.

Mr. J.D. Dowell, Deputy Manager at the Office of River Protection (ORP), welcomed the meeting attendees and thanked the Board members for their service to the public. Mr. Dowell provided background on ORP, which manages and mitigates waste distributed in 177 tanks across 18 tank farms in the central plateau.

Ms. Jane Hedges, Program Manager for the Washington State Department of Ecology, welcomed the meeting attendees to Hanford, and thanked the members for their participation.

Mr. Dennis Faulk, Program Manager for the U.S. Environmental Protection Agency (EPA), welcomed the meeting attendees to the Tri-Cities and briefly spoke about the history of the Hanford Advisory Board (HAB). He also discussed current funding issues.

#### **EM Update**

Mr. Jack Craig, Associate Principal Deputy Assistant Secretary for DOE EM, gave an EM update. The presentation is available at: <http://energy.gov/em/downloads/chairs-meeting-april-2014>

Mr. Craig stated that the DOE EM SSAB is critical to the success of the EM program, and the Board's work is valued by DOE. EM wants to continue its strong relationship with the boards at the cleanup sites around the country.

Mr. Craig noted that he previously worked with the Fernald, Ohio, site Citizens Advisory Board (CAB) for 15 years, until the site closed in 2008. He noted that the successful site closure could not have been done without the work of the Fernald CAB. Mr. Craig mentioned that he also worked with advisory boards focusing on future use, such as the Mound Development Corporation at the Mound, Ohio, site after EM successfully completed cleanup. The Mound site was geared toward industrial reuse, whereas Fernald was geared toward public access and became a nature preserve.

EM understands how important it is to work with stakeholders in all aspects of the program. The volunteer nature of the EM SSAB means board members spend a lot of time and effort helping DOE. EM's successes have been largely due to working with the members of the local communities.

This year marks the 25<sup>th</sup> anniversary of the EM program. Mr. Craig shared EM program accomplishments from the last 25 years. As the largest cleanup program in the world, EM's activities have included excavating, demolishing, treating, packaging and transporting material throughout the country. Some sites also have a mission to safeguard nuclear material.

EM began with 107 contaminated sites across the U.S. As of today, there are 16 sites remaining. There has been a 90 percent reduction in the EM program's contamination footprint across the country, from about 3,100 square miles to less than 300 square miles. EM has spent approximately \$144B doing cleanup work over the last 25 years. However, much work remains. EM estimates that an additional \$205B is necessary to complete cleanup by 2060. This budget will fund tank waste, decontamination and decommissioning (D&D), waste management, handling of special nuclear material and fuel, groundwater and soil cleanup, infrastructure (maintenance and monitoring of the sites) and site security. Tank waste is the number one activity in terms of funding and risk.

In honor of EM's 25<sup>th</sup> anniversary, EM created an EM timeline, which can be accessed at <http://energy.gov/em/articles/em-historical-timeline>. The timeline is an interactive display that shows EM's accomplishments across the complex. The timeline is a user-friendly tool that summarizes information about EM's progress to date.

Mr. Craig then turned to the fiscal year (FY) 2015 budget request, noting that the budget situation across the complex is challenging, but working with the boards and the public will hopefully improve the cleanup decisions.

Sites are working on their individual budgets for FY 2014 and FY 2015. Acting Assistant Secretary David Huizenga has testified on the budget twice. Ms. Terry Tyborowski, EM's Deputy Assistant Secretary for Program Planning and Budget who previously made presentations to the EM SSAB, has moved to the DOE Office of the Chief Financial Officer. Mr. Dennis Deziel, Ms. Tyborowski's former deputy, has been appointed Acting Deputy Assistant Secretary for Program Planning and Budget and will now act in Ms. Tyborowski's former role.

The FY 2015 budget request of \$5.62B is greater than the FY 2013 enacted budget of \$5.30B, but less than the FY 2014 enacted budget of \$5.83B.

EM's highest priority mission area is high-level waste (HLW) and radioactive tank waste treatment. There is a large mission remaining at Hanford, Savannah River Site (SRS), and Idaho. The largest part of the budget goes toward HLW at these sites. Work is focused on the retrieval and treatment of sodium-bearing waste from the remaining tanks at Idaho, packaging canisters of HLW at SRS, and working on the low-activity waste (LAW) pretreatment system for the Waste Treatment and Immobilization Plant (WTP) at Hanford.

The budget will also allow EM to complete facility cleanout and demolition projects and move out on new projects across the complex. Plans are to complete projects along Richland's River corridor, Oak Ridge's East Tennessee Technology Park, and the C-410 Complex at Paducah. At Portsmouth, D&D of the Gaseous Diffusion Plant (GDP) is occurring. EM is also getting ready to start transition to the D&D phase of the Paducah GDP.

Within the disposition for nuclear materials and fuels mission area, EM is pursuing plutonium disposition at SRS for conversion to oxide to provide feed for the National Nuclear Security Administration's (NNSA) surplus plutonium disposition project. EM also plans to continue off-site disposal of U-233 currently stored at Oak Ridge. Additional projects are underway at Hanford, SRS, Portsmouth, and Paducah.

Within the transuranic (TRU) waste mission area, recent incidents at the Waste Isolation Pilot Plant (WIPP) resulted in closure of the facility. EM is addressing issues while remaining committed to meeting its obligations. Currently, the FY 2015 budget does not support any activities to help make WIPP operational again. Idaho's Advanced Mixed Waste Treatment Plant (AMWTP) is continuing to process TRU waste, with a FY 2015 goal of dispositioning 90% of legacy TRU waste from the Idaho site.

In the area of soil and groundwater remediation, EM hopes to complete the remediation of the bulk of 1,200 release sites along the River Corridor at Hanford. EM will continue to operate groundwater remediation at multiple sites, including 39 sites at SRS alone. At Oak Ridge, plans are to complete the preliminary design of a new facility to treat mercury contamination in surface water.

During FY 2015, EM will continue to support technology development to address critical gaps in EM's capabilities. EM will also continue to support its workforce of 1,500 full-time equivalents (FTEs) who oversee cleanup work across the complex.

Mr. Craig concluded with a charge to the EM SSAB to help with budget priorities and identify community expectations within EM's flat funding profile. EM also wants to help broaden participation throughout the country and increase participation with the local boards.

## ***Discussion***

Ms. Susan Leckband, Vice Chair of the Hanford Advisory Board (HAB), asked about funding. The HAB has heard from the local agency staff that funding has become very critical. With the double shell tank leak at Hanford, the argument is even more compelling for adequate funding as the site is counting on those double-shelled tanks for space and to lead into WTP. What can the EM SSAB do to make a compelling argument to increase funding to meet needs? The HAB is concerned that Hanford is not getting the necessary level of funding for the remaining cleanup, which leads to more risk.

Mr. Craig agreed that the level of funding for EM activities is a challenge at every site. There are challenges with flat funding, and with funding that does not account for inflation. Each board should work with local DOE managers to provide funding recommendation as they see fit. The Budget Control Act and other actions by Congress have made funding across the federal government a larger challenge. EM does plan for a flat budget, but it is difficult to do adequate planning without budget certainty.

Mr. David Hemelright, Chair of the Oak Ridge (OR) SSAB, supported Ms. Leckband's point that EM needs more funding. Oak Ridge is one of the smaller sites, but has unique discriminators, such as high population, high rainfall and impact to the rivers. Oak Ridge has the potential for viable economic development if the site gets completely cleaned up. Mr. Hemelright expressed concern about the populace in the area. EM has a lot of cleanup that needs to be done fairly quickly, to open up the site.

Mr. Craig stated that if the Board has common ideas about the budget, making a recommendation to EM would be helpful.

## **Presentations: Chairs Round Robin: Chairs' Site Reports**

The Chairs shared current issues facing their sites and significant local board accomplishments and activities. A copy of the Round Robin presentation is available at:  
<http://energy.gov/em/downloads/chairs-meeting-april-2014>

### Hanford Advisory Board – Steve Hudson

Tank farms are a topic of public interest. Tank waste characterization, retrieval, treatment and disposition drive much of the HAB's advice and discussions. The question of funding is embedded in most discussions, given how much work the site wants to accomplish in a set amount of time.

The HAB has also begun to discuss risk further, due to project extensions and funding concerns. Mr. Hudson, Chair of the HAB, asked the Chairs to think about the low status of the word "waste." He believes that the word "waste" does not attract positive attention from the public.

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

The Integrated Waste Treatment Unit (IWTU) is a facility built to process the remaining liquid waste at INL. Due to design and operational issues, operation was delayed, so the IWTU is currently undergoing a recovery process and design modifications. The IWTU is scheduled to begin processing sodium bearing waste in May 2014.

The INL CAB is especially interested with the IWTU because of a settlement agreement between the State of Idaho and the site, which set a date for completion of processing of sodium bearing waste. Due to facility issues, the site missed the completion date. As a result of this missed deadline, INL is currently prohibited from bringing spent fuel onto the site until the sodium bearing waste is completely processed.

The INL CAB is satisfied with the work of DOE and its contractors. It has been a long process, but Mr. Herb Bohrer, Chair of the INL CAB, believes that the agency and the workers were right to ensure that everything was in order before proceeding with the operation of the IWTU.

The TRU waste at Idaho has already been certified and packaged for shipment, but is being held until WIPP resumes operations. In the meantime, Idaho waste managers are looking for ways to improve the storage capabilities of the site.

Mr. Bohrer noted two accomplishments of the INL CAB. First, the board issued its first newsletter last month, in hopes of stimulating public interest in the INL CAB and in the activities of the cleanup program at the site. Second, in terms of recruitment, the INL CAB recently submitted five names to EM headquarters (HQ) for approval, which would bring the board to full membership.

Mr. Carlos Valdez, Chair of the Northern New Mexico (NNM) CAB, asked whether INL has looked at any other places to move the waste since WIPP's shutdown. Mr. Bohrer responded that he cannot speak for DOE, but he does not think any alternative locations for the waste have been identified.

### Nevada Site-Specific Advisory Board (NSSAB) – Kathleen Bienenstein

DOE generally has two open houses a year for environmental management, one for groundwater and one for waste management activities. The NSSAB always participates as a board, and brings a display for recruitment purposes. The NSSAB has been asked by DOE to recommend how to improve the open house process and attract more people.

The NSSAB recently conducted a membership drive, trying innovative ways to attract potential members, including putting billboards up in one of the rural communities. While conducting membership interviews, the board found that a few people applied because they had seen the billboards, which are less expensive than mailing postcards.

Ms. Donna Hruska, Vice Chair of the NSSAB, stated that for the second year in a row the NSSAB has had a local high school student act as a student liaison to the board. The student



liaison is charged with conducting a pre-survey to test other students' knowledge about the Nevada site prior to a presentation about the site. Following the presentation, the student administers a post-presentation survey to see what the students learned. It is the NSSAB's hope that through the continuation of this project, the board will be able to find ways to generate interest among high school students.

Mr. Hudson asked whether the open houses are typically helpful in educating the public, and whether the open house attendees attend public meetings as a result of the open house. He also inquired about the length of time that the attendees stayed at the open house. Ms. Bienenstein, Chair of the NSSAB, responded that it has been her personal experience that those persons who do attend the open houses come to learn. The open houses consist of tables from different departments within DOE, and usually pertain to what is currently being worked on in environmental management. There is usually an expert at each table to answer any questions that the public may have.

Ms. Leckband asked whether the NSSAB works with local high schools or colleges to find the student liaison. Ms. Hruska responded that the board has not yet worked with any colleges, but it is only the second year of the program. The NSSAB is working towards finding the right fit for the high school program. She recommended that other interested boards begin searching for a student liaison early. The NSSAB has learned to contact physics teachers directly, rather than principals or guidance counselors, and to make sure that the student applies early in the year, so that the student can come onboard at the same time as the new board members.

Ms. Leckband asked whether NSSAB has thought about having one of the board members mentor the student liaison. Ms. Hruska responded that the membership committee as a whole supports the student.

#### Northern New Mexico Citizens' Advisory Board (NNMCAB) – Carlos Valdez

The NNMCAB has increased its membership to twenty members. It is a diverse board that is representative of northern New Mexico. There are eight women, twelve men, three Native Americans and five Hispanics, as well as one member that worked for Los Alamos National Laboratory (LANL) in the past.

The NNMCAB has a very successful student internship program. Three high school students and one college student have worked with the board during the past year.

One important recommendation from the NNMCAB during the last year requested the realignment and re-prioritization of the Consent Order and the cleanup work that remains. The board has learned that short term framework agreements work better. The board is classifying what work is left in the Consent Order, creating a temporary framework agreement for each topic, and creating informational campaigns.

The NNMCAB submitted a recommendation on WIPP capacity, as it relates to the LANL waste inventory. In response to the recommendation, a WIPP representative spoke to the NNMCAB and alleviated the board's concerns.

The board also submitted recommendations for FY 2015 and FY 2016 budget prioritization.

The NNM CAB was also able to turn a recommendation pertaining to wildfires at the labs into a lab-wide fact sheet. The last wildfire came within three and a half miles of the labs, which sparked national attention. This spurred the 3706 TRU Waste Campaign, an effort to remove as much of the above-ground TRU waste from the mesa as possible. The NNM CAB supported DOE with the rollout of the framework agreement to remove all waste from the mesa by the end of June 2014. DOE is temporarily storing the waste at Waste Control Specialists (WCS) in Andrews, Texas, which is helping LANL meet the framework agreement until WIPP reopens. Once WIPP reopens, the waste from WCS will be moved to WIPP. Despite the WIPP closure, the campaign is still on track and within budget.

During the May 21, 2014, full board meeting, a representative from New Mexico's Department of Environment will address the NNM CAB. The board will then have the opportunity to rank the various campaigns presented, and to recommend what it believes LANL should work on following the completion of the 3706 TRU Waste Campaign.

#### Oak Ridge Site-Specific Advisory (ORSSAB) – David Hemelright

ORSSAB is concentrating on groundwater conditions and potential groundwater migration under the Clinch River, which surrounds the Oak Ridge Reservation on three sides. There are several areas of the Oak Ridge Reservation with groundwater contamination from past activities. OR is a unique site because there are many rocks and caves, which make it difficult to track groundwater.

In 2013, DOE, EPA and the Tennessee Department of Environmental Conservation participated in a series of workshops to discuss possible solutions to groundwater issues. DOE engaged an independent observer from the U.S. Geological Survey (USGS) to report to ORSSAB on these workshop proceedings. The participants at the workshops agreed that a near-term offsite monitoring project should be used to assess potential risk to properties adjacent to Oak Ridge. The participants also recommended additional baseline funding for the groundwater program, which the ORSSAB supports.

Dr. Dan Goode, the liaison from USGS, made a number of suggestions for possible recommendations to DOE, including: to proceed with offsite groundwater quality assessment (ORSSAB approved such a recommendation at the April 2014 meeting); to secure additional baseline funding for interpretative analysis to obtain maximum benefit of monitoring data (ORSSAB approved a similar recommendation); to adopt plume rankings for the management of site wide groundwater remediation; and to collect, review and archive records associated with hydrofracturing disposal.

ORSSAB is also working on public outreach, membership recruitment and the addition of new student representatives.

Ms. Leckband asked whether the ORSSAB is satisfied that the mercury that has escaped the OR site is adequately characterized and located. Mr. Hemelright responded that the board is unsatisfied. Two million pounds of mercury were misdirected during the Manhattan Project's hydrogen bomb development, and the location of that mercury is still unknown. It is therefore important for the OR site to add additional monitoring wells.

Mr. Valdez asked about the depth of the water table in Oak Ridge, and whether the site is currently doing any pump and treat to process the contaminated water. Mr. Hemelright responded that the water table is at the surface, and whether it is below the surface depends on which rock units it contains. The geology of the Oak Ridge Reservation is complex and the groundwater flows through fractured rocks, and not through aquifers like in northern New Mexico. There has been some pump and treat success at the old K-25 site, but most of the groundwater is either too deep in the groundwater system or in the rocks, which means it would have to be mined out.

Mr. Hudson asked whether there is a particular process that OR uses to set priorities. Mr. Hemelright responded that the board members worked with Dr. Goode of the USGS, EPA and DOE to establish a priority matrix. Health, risk, hazards, size, volume and other items were scored on a spread sheet, and each plume was given a numerical value based on that information.

#### Paducah Citizens Advisory Board (Paducah CAB) – Ben Peterson

Mr. Peterson, Chair of the Paducah CAB, thanked the DOE staff for working on the global laser enrichment project. He stated that if the project does occur, it will likely not take effect for the next four to five years, but it remains an important beacon of hope for the Paducah site, because loss of jobs continues to be an issue. There are indications that 100 employees will be leaving by the end of June 2014, which would bring the site-wide total employment down to around 600 people. That is the lowest it has ever been, and about 600 fewer employees than when the Paducah CAB met six months ago.

Mr. Peterson indicated that the people of Paducah are generally optimistic and ready to work toward a better future, but do need assistance from DOE. He stated that the community needs DOE to begin spending FY 2014 dollars, and to begin the process of transitioning the site from the United States Enrichment Corporation back to DOE. The board would also like DOE to communicate the transition plans for the site to the Paducah community. The community has not yet heard any definite plans from DOE.

Paducah is a community that believes it can help DOE accomplish its goal, while securing a better future. The community wants to maximize the opportunities to leverage the assets of the site.

Mr. Peterson was pleased to hear that DOE values future land use, but indicated that the site cannot develop a future land use plan if decisions are made in a DOE bureaucratic vacuum. A big fear within the community is to be caught without funding for the site. Mr. Peterson also noted that Paducah has been without a dedicated site lead for some time, and that the site is

afraid that it is missing out by not having a single point of contact for the site. The site is pleased that Secretary Moniz committed to making this a priority.

#### Portsmouth Site-Specific Advisory Board (PORTS SSAB) – Val Francis

Mr. Francis, Vice Chair of the PORTS SSAB, stated that the board's expectation is that if an on-site disposal cell is built, the site will remain properly funded to accomplish the cleanup.

The site encompasses about 3,700 acres, and is in an extremely rural area with a low population. The site is the primary employment base in the community. The end goal is to maximize future land use and reindustrialize.

The PORTS SSAB is working on a recommendation that makes it clear that the community is united in supporting reindustrialization.

Ms. Sharon Manson, a PORTS SSAB board member, noted that the PORTS SSAB has been working on building community relationships, especially in the education sector. The board recently partnered with Shawnee State University and held its second Science Bowl, an academic competition for students from high schools in the communities surrounding the Portsmouth site. The Science Bowl is one way that students in the Portsmouth community are learning more about science and math and gaining skills for their future. The board also held its fourth Science Alliance, comprising four surrounding counties. DOE sets up different projects that students can work on and allows them to gain hands-on experience. The site also offers students tours that allow them to learn about the site and what is being accomplished by D&D.

The Portsmouth site does not have a museum, but it does have traveling display boards that show the history of the site. The display boards have been set up throughout the four surrounding counties, as another way to promote the work at the site.

#### Savannah River Site Citizens Advisory Board (SRS CAB) – Marolyn Parson

Ms. Parson, Chair of the SRS CAB, stated that the shipments of spent nuclear fuel (SNF) and the accumulation of treated nuclear waste continue to be a concern for the community. Citizens are concerned that SRS is destined to become a long-term repository. This is especially a concern since the future of WIPP is currently in question.

Ms. Parson is concerned that public meeting attendees outside of the SRS CAB know about future waste receipts before the SRS CAB does. There are ongoing discussions about the future of these receipts. In the summer of 2013, there were rumors that commercial SNF would be sent to SRS. The overwhelming feeling of the community was that spent fuel should not be brought to SRS, unless there was a disposition path out of the State of South Carolina.

The SRS CAB successfully addressed citizen concerns regarding the impact of the site on the public and environment in Georgia. Georgia previously had an independent environmental monitoring program, but has not had one since 2005. Conversely, DOE currently pays for an independent environmental monitoring program in South Carolina. The SRS CAB's Facilities

Disposition and Site Remediation Committee ended up having six presentations in 2013 from the Georgia Department of Natural Resources on this subject. Also, the Georgia Women's Action for New Directions acted as the driving force behind the public expression of interest and reinitiating of the independent environmental monitoring program in Georgia. As a result, the Facilities Disposition and Site Remediation Committee drafted a recommendation asking DOE to reinstate the program and begin conversations with Georgia regarding this goal. The recommendation was passed by the SRS CAB and submitted to DOE in January, and in March, DOE responded. While DOE did not accept the recommendation, it asked the Savannah River Ecology Lab, operated by the University of Georgia, to study the issue and make a recommendation to DOE about whether additional monitoring should be done.

### **Waste Isolation Pilot Plant (WIPP) Update**

Mr. Frank Marcinowski, Deputy Assistant Secretary for Waste Management, gave an update on the recent incidents at WIPP. The presentation is available at: <http://energy.gov/em/downloads/chairs-meeting-april-2014>

Mr. Marcinowski noted that there is a great deal of interest in the recent incidents at WIPP, what the future holds, and how WIPP's current closure will impact TRU waste operations at the various sites that rely on WIPP for disposal. There is a firm commitment to make sure that WIPP becomes operational again. EM is evaluating the events, while being as transparent as possible. The website <http://www.wipp.energy.gov/wipprecovery/recovery.html> is updated daily with any new monitoring data, status, accident investigation reports, etc.

Two incidents occurred at WIPP in February 2014 that required operations to be paused. The first occurred on February 5. A salt haul truck that was underground caught fire, which engulfed the front wheels of the truck and created a great deal of smoke from the burning tires. Workers who were underground at the time were safely evacuated.

An accident investigation started immediately to determine the cause of the fire. All waste operations were halted while the investigation was ongoing. Members of the accident investigation team were the only people allowed underground.

The fire investigation report has been completed and released; it is posted online. There were a number of actions that the accident investigation report identified that need attention on the contractor and federal side, as well as the emergency response side. EM is currently compiling an extensive corrective action plan to address all issues raised.

The second event, a radiological release, occurred on the evening of February 14. There was no work occurring underground when the radiological release was detected.

Early the next day, a crew reported that there was some radioactivity released from the exhaust system. When the underground continuous air monitor trips, it automatically causes the ventilation system to divert from an unfiltered exhaust stream to a filtered exhaust stream. However, the filters are more than 99 percent effective, so there was only a small amount of radioactivity that was released into the environment.

There has been extensive monitoring of the environment (air, soil, water and vegetation) from the time of the incident by both EM and the Carlsbad Environmental Monitoring Research Center, an independent monitoring organization. The State of New Mexico and EPA have conducted independent monitoring as well.

The results from the various organizations seem to be in agreement that the releases to the environment were minimal. None of the releases exceeded any of the regulatory limits. The radiological release levels continued to decrease from the peak of the release at the time of the event; the levels have now returned to background levels. EM believes the release has been stabilized.

Mr. Marcinowski noted that there is approximately a half-mile distance between the sites of the two incidents, and EM does not believe there was any connection between the two events. The continuous air monitor is located outside panel seven in WIPP. Each panel contains seven disposal rooms, each of which is the length of a football field. The workers were in the process of actively disposing of waste in panel seven, room seven. There was only a small amount of waste in that area, which is where EM believed the source of the radioactivity that made its way to the surface can be found. The recovery team, which includes members of the accident investigation board, has been working its way toward panel seven since the mine was stabilized.

Personnel who were either on site at the time of the event, or came on shift the morning after, have received biological monitoring. EM offered sampling to any who may have been exposed to the radioactivity that was released from the mine. Some workers tested positive, which means there were detectable levels of radioactivity within their urine or fecal samples. Follow up has been done on each of these individuals; none received any measurement that would cause any health effects. All tested individuals have been notified of various results. The testing will continue until EM completes all of the sampling results.

There are various steps that EM has taken or will take in order to recover the facility. First, EM needs to make sure that the mine had been stabilized, and that there were no further releases that were going to occur. Monitoring continues on a daily basis. Once EM knew the mine was stabilized, the facility began unmanned entry into the mine. Instrumentation - including cameras, continuous air monitors, and other devices - were sent down through the salt shaft and the air intake shaft as a precursor to sending personnel down. None of the instrumentation detected any radioactivity.

The next stage was to send a team into the mine. The Mine Safety and Health Administration assisted EM to address any mine safety issues. Workers were sent into the mine through the salt shafts. There have been several manned entries so far, and teams have worked their way continuously towards the area where EM believes the radiological release occurred. On April 2, two teams of eight people went underground. On April 23, a team reached the area of potential release.

Moving forward, there will be a need for decontamination. EM believes that the best course for the disposal room where it is believed the release occurred is for it to be backfilled. Then work

will move to areas that are not contaminated or have less contamination but are still usable for disposal.

Continuous air monitors were placed along the path as the team made its way toward the area where it believes the release occurred. The team also established base operations in various locations. In certain areas, the team is wearing personal protective equipment and respirators, which is taxing on the body's system. There are going to be areas where team members can go to change out of protective equipment, put on additional protective equipment, or change out respirators if needed.

From that point on, where it is more contaminated, the team is going to have to don an additional level of protective equipment. In the mid-to-late May time frame, the team will have to change out the high-efficiency particulate air (HEPA) filters that are on the surface of the exhaust shaft. The team is doing mock ups of how to accomplish this, and they are building the necessary protective covering. Additional HEPA filters have been already delivered to the site. The intent is for EM to have an understanding of what caused the event underground before beginning to change out the HEPA filters, because the HEPA filtration system will need to be operating in order for people to enter the mine.

Throughout this process, EM has been drawing resources from across the complex, including from SRS, Oak Ridge, INL and Hanford. The WIPP facility has been operated as a clean facility; it was meant to handle waste containers, not waste. For this reason, there were no personnel that were used to working in a radiation environment like at other sites across the complex. So EM needed to call in expertise from other sites to assist with the reentries.

Recently, EM had an extensive senior level meeting about the recovery efforts. Decontamination will need to occur in some locations. EM is also discussing the fact that the ventilation system needs upgrading. EM is working to supplement its FY 2015 budget request in time for Congress to consider it in appropriations decisions.

EM is also evaluating what the WIPP closure means for the various sites that have been generating waste and sending it to WIPP. EM has TRU waste compliance agreements with numerous states. EM also has contracts in place to complete certain activities at various sites.

One near-term deadline is at LANL. EM was on schedule to meet a deadline for TRU waste shipments at the end of June. The deadline has significance because waste would be removed off the mesa prior to the pending wild fire season, consistent with EM's commitments to the governor of New Mexico. Whether EM meets this deadline will have an impact on future discussion with the State of New Mexico regarding the consent order that is currently in place which requires EM to complete all the work at LANL by the end of calendar year 2015. This was an important milestone for EM to try and meet even though EM faced the WIPP closure.

EM has been working hard during the last month and a half to find alternatives. EM was able to facilitate storage for the LANL waste at the WCS facility, which is an hour away from WIPP. EM does not like to increase transportation risks when not necessary. WCS is a facility that is close to where the final resting place for this waste would be, just across the border in Texas.

EM started shipping waste that otherwise would have gone to WIPP from LANL to WCS. That effort is going well and may still be accomplished by the end of June.

While WCS is helping EM work to complete the LANL campaign, it is costing additional monies because WCS is a commercial facility. EM has to weigh the benefits versus the cost. EM can leave waste on site at LANL, not incur those costs and use those funds for other activities.

EM is also looking at what happens at the other waste generator sites. At OR, EM has commitments to start moving TRU waste. If WIPP were operational, EM would have done so already. Idaho has been a primary shipper to the WIPP facility. EM is currently not able to move spent fuel because of issues with the IWTU. At SRS, EM has repackaged all the legacy waste that needed to go off-site. SRS has sufficient storage, so off-site temporary storage is not necessary.

EM also does not want to impact the workforce that is processing the TRU waste at the various sites, and is working to determine the best way to continue the entire TRU effort across the complex. It will take time before the WIPP facility is again operational and accepting waste. EM needs to determine what actually caused the incident. If it is some significant safety issues that need to be addressed, EM must address that before workers can safely be sent back into that environment.

WCS will not be able to accept all the waste destined for WIPP. Remote-handled TRU waste cannot be stored at WCS.

## **Discussion**

Mr. Hemelright asked about the timeline for WIPP once again becoming operational. Mr. Marcinowski said that EM does not know until it determines the cause of the events, which will take time. EM is looking at options for having limited waste disposal operations at WIPP while EM waits for WIPP to return to full operations.

Ms. Leckband asked how long the WCS will last. She also wondered if the packages of waste being shipped to WCS are already packaged to meet WIPP requirements, and will just need to be trucked back to WIPP when appropriate.

Mr. Marcinowski answered that the base period for the contract is one year. But there are two options for EM to extend it, if necessary. At LANL, EM is building the payloads to be WIPP compliant. The waste is shipped to WCS in TRUPACT-II containers. EM removed the payload from the TRUPACT-II because EM did not want to store them in TRUPACT-IIs and tie all those units up for the amount of time that WIPP is out of service. Once WIPP is again operational, EM will take those payloads, put them back in the TRUPACT-II containers and then truck them to WIPP for disposal. EPA has been evaluating EM activities to ensure that it meets regulations.

Mr. Valdez asked what might have caused the salt haul truck fire. Mr. Marcinowski said that all of the equipment underground is diesel equipment, requiring a certain ventilation flow through



the mine to safely operate the diesel equipment. EM is evaluating whether WIPP should continue to use diesel equipment, or perhaps move to electrical equipment. It was believed that there was some hydraulic fluid that leaked onto a hot surface, and eventually ignited.

Mr. Valdez asked about the truth behind a theory that part of the ceiling collapsed and popped a canister, which might have led to the radiological release. Mr. Marcinowski stated that EM cannot confirm that theory until the investigation team examines the area.

Mr. Valdez asked if WIPP is considering implementing new maintenance and emergency response procedures. Mr. Marcinowski answered that he expects that the operation of the facility will be different than it has been in the past. After looking at the accident investigation report, it is clear that EM is going to have to do things differently. Mr. Marcinowski noted that emergency response procedures were one of the areas that the accident investigation team identified as needing revisions. EM is developing corrective actions; some have been implemented and the rest will be implemented before WIPP is operating again.

Mr. Valdez asked how many employees were exposed to the radiological release, and to what degree, as compared to an x-ray. Mr. Marcinowski said that the exposures were extremely low, less than one would receive traveling on a cross-country air flight or from a chest x-ray. Mr. Craig added that 149 employees have been tested, and 20 employees had a positive test. The dose estimate to those employees has been calculated to less than 10 millirem each. All those employees have been given information, and EM is has been communicating with them regularly.

Mr. Harold Simon, Vice Chair of the SRS CAB, asked if all of the employees in the containment area were identified, and if any of them were not tested. Mr. Marcinowski answered that all of the employees were identified; in fact, the testing was offered to every employee that was on site.

Mr. Bohrer asked Mr. Marcinowski to confirm that no air contamination was found on the continuous air monitors that were installed in the mine. Mr. Marcinowski answered that the continuous air monitors have not tripped since they were installed.

Mr. Bohrer asked if there was loose surface contamination in the mine. Mr. Marcinowski said that EM assumes there is. Mr. Bohrer added that EM cannot confirm this information, which is why the investigative team is wearing protective clothing. Mr. Marcinowski mentioned that as the team has gotten closer to panel seven, they have been identifying elevated levels of radioactivity on the floor and the walls.

Mr. Bohrer noted that the investigation report on the fire shows serious management lapses in maintenance and operations. EM operates under the Integrated Safety Management System (ISMS), the key safety management system of DOE. This WIPP event shows some serious breakdown in how ISMS has been implemented or maintained in the facility. As EM develops corrective action plans for WIPP what is EM's sense of the state of ISMS at the other sites who are also operating under this same system?

Mr. Marcinowski noted that the investigation report was very sobering. EM's Office of Safety, Security & Quality has been sharing the information and talking to other sites about maintenance and emergency response at their facilities. Sites across the complex are working to take a look internally at their own systems. Sites are sharing so this kind of event does not occur again at another site.

Mr. Craig mentioned that Mr. Huizenga recently sent each of the field managers the investigation report and has asked them to formally report on the status of maintenance activities and other judgments of need from the report. The reports are due in mid-June. EM SSAB points of contacts/field managers can share that information with the board members.

Mr. Doug Sayre, Vice Chair of the NNM CAB, noted that there are two kinds of criteria, one for the mining operation and one for disposal of the containers. He asked if this could be associated with the issues in the mine. Mr. Marcinowski stated that the investigation team's results supported that conclusion. The facility had been applying one criteria for maintenance for the underground equipment that would handle the waste packages, and another set of criteria for the equipment that did not handle the waste packages. The salt haul truck fell into the second category. There are certain guidelines for cleaning the trucks, maintaining use of non-flammable hydraulic fluids, etc., that were not being followed. WIPP will need to step up the appropriate maintenance on the equipment.

Mr. Sayre asked if LANL and some of the other facilities across the nation could possibly look at WCS for permanent disposal of TRU waste, despite the cost. Mr. Marcinowski stated that WCS cannot be a permanent solution. The WIPP facility is the only legislatively-directed site for disposal of TRU waste in the U.S. The Land Withdrawal Act gives EM the authority to dispose of TRU waste at WIPP; it would take an act of Congress change this.

Ms. Judy Clayton, a member of the Paducah CAB, noted that as an emergency responder at the Paducah site, she appreciates EM's cautious approach and graded response to the events at WIPP. She appreciates EM putting worker safety before its disposal mission.

Ms. Parson asked if panel seven, where EM believes the breach is, contains remote-handled waste. Mr. Marcinowski answered that panel seven contains both remote- and contact-handled waste. Holes are bored into the walls of the facility, and remote-handled canisters are put into the holes. Contact-handled waste is put on the floor of the room.

Mr. Bruce Hicks, Vice Chair of the ORSSAB, asked about the HEPA filters, and whether there is gaseous product that EM should be concerned about. Mr. Marcinowski said that EM is concerned with the release of Americium 241 and Plutonium. There is also naturally occurring radon gas, and it is detected occasionally.

### **Waste Disposition Strategies Update**

Mr. Marcinowski provided an update on EM's waste disposition activities. A copy of the presentation is available at: <http://energy.gov/em/downloads/chairs-meeting-april-2014>

## Waste Management Accomplishments and FY 2014 Priorities/Goals by Site

### Idaho National Laboratory (INL)

INL resumed the Accelerated Retrieval Project (ARP) retrievals. The retrievals had stopped for budgetary reasons, but due to significant interest within the State, EM was able to divert funding and resume the retrievals. INL has completed the targeted exhumation of 3.22 acres out of the total 5.69 acres at the Subsurface Disposals. The exhumations are ahead of schedule at the ongoing at ARP VII and VIII enclosures.

EM has treated and repackaged over five thousand drums as part of the sludge drum campaign. EM has completed installation of the sodium distillation system to treat reactive sodium remote handled-wastes, and will begin operations in the next couple of months.

EM has completed the Readiness Assessments for the IWTU and is hoping to begin radioactive waste treatment soon.

### Oak Ridge

Waste disposition at K-25 is complete. EM is currently putting together plans for Outfall 200, which is the proposed site for the mercury water treatment facility at the Y-12 National Security Complex.

There is concern about the ability to meet the Contract-handled Transuranic Waste (CH-TRU) compliance milestone because disposition at WIPP may not be possible. EM may have to evaluate the impact of not being able to ship off-site, and find another method of meeting the milestone. In the coming weeks, EM will discuss options for onsite storage.

### Savannah River Site (SRS)

SRS has reduced the stored legacy CH-TRU waste to 600 cubic meters from over 12,000 cubic meters. This waste needs to be shipped off-site. Mr. Marcinowski does not believe that temporary storage at WCS is the best solution. There is no compliance driver to get it off-site, so it can ship when WIPP is again operational.

SRS has been blending excess plutonium and shipping it off-site. Numerous pipe overpacks are packaged and ready to be characterized and shipped. The WCS cannot currently store this material because of needed security requirements. Under a legislative agreement, EM must ship one metric ton of plutonium out of South Carolina by January 1, 2016.

SRS is the first and only site to use TRUPACT III shipping containers, which the site needs to complete for the shipping campaign of the remaining legacy waste. The plan is to move those TRUPACT IIIs to other sites, so that the other sites can utilize them. EM may be able to delay movement of the shipping containers in order to allow WIPP to become operational, and then SRS can complete the TRUPACT III needs at the site.

EM has closed tanks Five and Six at SRS, which are HLW liquid waste tanks. These are the fifth and sixth tanks to be closed.

DOE has been looking at the policy of commingling defense and commercial HLW in an effort to follow-up on the Blue Ribbon Commission Report. A recommendation concerning commingling will be transmitted to the Secretary of Energy. It is then up to the Secretary to determine whether to proceed with a defense only repository versus a commingled repository.

### Portsmouth and Paducah

The C-410 Feed Plant at the Paducah GDP is slated for demolition in FY 2014.

At the Portsmouth site's X-326 Process Building, more than 1,100 of the converters have been shipped off-site to the Nevada Test Site for disposal.

At both Portsmouth and Paducah 13,579 total metric tons of depleted uranium (DUF6) have been processed, and the throughput of the facilities is on track with what was expected at this point in time.

### Hanford

Hanford has disposed of 15.6 million tons of contaminated material at the Environmental Restoration Disposal Facility (ERDF) since 1996. This includes the recent disposal of the Plutonium Recycle Test Reactor.

Hanford is continuing work at the K-West Basin. The site is continuing construction activities for systems to retrieve, package and transport highly radioactive waste away from the Columbia River, to put in interim storage.

The Plutonium Finishing Plant (PFP) is continuing the glove box removal efforts.

### Small Sites

#### West Valley Demonstration Project (West Valley, New York)

EM recently executed a Waste Incidental to Reprocessing (WIR) evaluation on a melter and other components, which were determined to be low-level waste (LLW). EM is looking to ship the components off-site to WCS for disposal in FY 2015.

The construction of the HLW Storage Pad is essentially complete. EM is planning to start moving some of the HLW canisters that are stored in the process facility at West Valley onto a pad for storage. The goal is to eventually get all 275 of the canisters out of the process building so that demolition can begin.

Deactivation of the Main Plant continues with asbestos abatement, removing contaminated pipes and vacuuming fine debris.

### Separations Process Research Unit (SPRU) (Niskayuna, New York)

The highest source term at the facility was sent to WCS for disposal. Waste has been removed from the site and the decommissioning activities in the two building, H-2 and G-2, have resumed.

### Moab, Utah

Moab is moving the waste up the Crescent Junction at a good pace. Thus far in 2014, EM has shipped over 427,000 tons of uranium residual radioactive material from Moab to the engineering disposal cell (cumulative 6.7 million tons).

There is sufficient funding to keep Moab operating year round, and the workers do not have to take the three-month pause that was originally in their contract.

### Nevada National Security Site (NNS)

More than 1 million cubic feet of waste was disposed of at the Nevada site in 2014. The future disposals may be impacted depending on the state of the budget because the LLW is on a prioritization scheme, and is the lowest on the priority list regarding funding.

Nevada's governor, Mr. Brian Sandoval, has raised concerns about the disposal of certain types of waste. This impacts other sites because there are waste streams that have been put on hold due to the concerns raised. EM has done a lot to address Nevada's concerns, including holding public meetings and conducting meetings with county officials. Also, the NNSA Office of Secure Transport has held numerous sessions with the county and local emergency responders.

The earlier FY 2014 forecast of cleaning up 1.4 million cubic feet of LLW and mixed low-level waste (MLLW) will more likely be closer to 1 million cubic feet, due to current funding.

### Commercial Disposal Options Update

DOE's policy is that waste is first disposed where it is generated; 80 to 90 percent of the waste is disposed on the site where it is generated. If it needs to go off-site, the preference goes to another federal facility. Currently, the only other facility is NNS.

Energy Solutions continues to accept a large part of EM's off-site LLW. This is limited to Class A waste, while WCS has a broader portfolio of waste that it can accept. Both of these facilities are important for disposal and cleanup operations.

### DOE Low-Level Waste and Mixed Low-Level Waste Forecasts

DOE updates its life-cycle LLW and MLLW forecasts annually, after a review of data from across the complex. The information is available to the public on the Waste Management

Information Management System (WIMS) website. The WIMS website provides a good picture for where the waste is destined to go, and where waste is orphaned. The system is available to the public and only requires a password that is provided through the website. The website currently only deals with LLW and MLLW, and not TRU waste, HLW or spent fuel.

#### Disposition Planning - TRU and HLW

Currently there is no disposition path for HLW and spent fuel; it is being safely stored until a disposal repository is identified. There are only three sites where defense HLW is being stored. The focus is on stabilization and safety for the interim storage. There is excess plutonium at SRS, which has been initiated for disposal at the WIPP facility. There is the potential for the disposal of certain tank waste at the TRU facility but that is not in the legacy inventory.

The EM SSAB sent a recommendation to EM on the creation of a tool that graphically displays the disposition paths of wastes from various sites. The WIMS internet system allows a display of LLW and MLLW, but Mr. Marcinowski noted that EM is open to discussing expanding the tool to include TRU waste, HLW, and spent fuel.

For disposition planning, there are many challenges ahead with TRU waste and what will be done in the interim while the WIPP facility remains closed to waste shipments.

#### *Discussion*

Ms. Leckband commented that WIMS was exactly what the Chairs envisioned with the graphic representation of waste disposal paths recommendation. Ms. Leckband noted that pictorial forms would make it easier for the public to understand the information, and suggested this type of information be shared on the DOE website.

Ms. Leckband asked whether there are concerns about the length of time of the temporary storage of the HLW containers at SRS due to the high rainfall. Mr. Marcinowski responded that EM is not concerned about this because the vitrified glass is in a very stable waste form and inside stainless steel containers.

Ms. Leckband asked whether there were concerns about the PFP final cleanup dates due to budget issues. Mr. Marcinowski responded that he would get back to her with an answer. Ms. Leckband noted that there have been various discussions on strategically and surgically removing some of the waste on the central plateau, and asked whether EM had any recent conversations on this matter. Mr. Marcinowski responded that the waste is still subject to regulatory decisions and EM has yet to discuss it.

Mr. Bohrer stated that Idaho has the AMWTP which sorts and segregates the waste. Waste has been shipped to Idaho from other sites to be processed, in order to meet WIPP certification requirements. However, there are restrictions and the waste cannot stay in Idaho for long. Mr. Bohrer stated that the AMWTP is a capability that exists for EM and other sites that generate waste and that may be helpful when discussing options for orphan waste.

Mr. Marcinowski stated that EM has shipped waste from other sites to be processed through the AMWTP. The State gives EM six months to process the waste and six months to ship it off-site. The AMWTP is an excellent facility, but its mission will come to an end in a few years. There have been discussions to figure out the next step for the AMWTP.

Mr. Valdez asked what would happen to the HLW in tanks Five and Six at SRS, and asked whether it was liquid or sludge. Mr. Marcinowski responded that the HLW was processed through a waste system at the facility, and turned into glass logs. The glass logs are in storage at the site. The tanks were cleaned out to the extent that they could be cleaned out, and the tanks passed regulatory approval. The tanks were grouted in place, and the waste has been stored onsite until there is a disposal site.

Mr. Valdez asked about a change in certification at the New Mexico Environment Department (NMED) to accept tank waste at WIPP. Mr. Marcinowski responded that a permit modification was submitted to NMED that would allow disposition of tank waste if it was determined to be TRU waste and met the WIPP Waste Acceptance Criteria. The permit modification is pending within NMED.

Mr. Valdez asked whether there is a possibility that Greater-Than-Class-C (GTCC) LLW, SNF and mercury will be going to WIPP, and whether there has been any discussion to expand WIPP. Mr. Marcinowski responded that right now the goal is to get WIPP operational to fulfill its original mission. There may be people who believe WIPP has a future beyond TRU waste, but right now there are no plans for WIPP beyond TRU waste.

Ms. Bienenstein stated that she appreciated EM's efforts to work with the elected officials in the State of Nevada, but that the NSSAB feels it is being overlooked during Consolidated Edison Uranium Solidification Project (CEUSP) discussions. The NSSAB would like to get on the agenda of the CEUSP meetings, so that it can share its concerns. The NSSAB feels that it should be allowed a seat at the table at the CEUSP meetings. Mr. Marcinowski stated that EM appreciates the NSSAB's efforts and that EM is more than willing to share whatever information it can with the board.

Ms. Parson asked Mr. Marcinowski to expand on pending and contemplated regulatory changes, and explain the contemplated regulatory changes that will impact cleanup. Mr. Marcinowski responded that the changes are primarily Nuclear Regulatory Commission (NRC) changes to commercial facilities, and that NRC is contemplating changes to the disposal regulations for oversight of commercial disposal facilities. NRC has proposed changes with regard to the compliance period, and whether depleted uranium should be classified as something other than Class A waste.

Mr. Sayre asked Mr. Marcinowski to elaborate further on the commingling report. Mr. Marcinowski stated that the Office of Nuclear Energy has the lead, but EM is working very closely with that office. The report is expected to be finalized within the next month or two.

### **Best Practices for Public Participation**

The Board discussed best practices for increasing public participation in public meetings.

### ORSSAB

Mr. Hemelright stated that in order to increase public participation it is important to increase meeting attendance. He stated that the ORSSAB may look into paying for a billboard, like the NSSAB did.

ORSSAB publishes a quarterly newsletter which discusses the board, profiles its members, and highlights and accomplishments of the OR site over the previous quarter. The newsletter is distributed to about 23 local libraries. The ORSSAB is currently trying to put the newsletter in the county executive's office and other local establishments.

Mr. Hemelright has also tried to recruit new members by discussing the board with his neighbors. Mr. Hicks added that the ORSSAB's attempts to get the public to come to the meetings appears to be falling short, and that he endorses the idea of speaking with people individually, but with considerable sensitivity. He believes that it is important to target teenagers, who can take the information back to their parents.

### INL CAB

Mr. Harry Griffith, Vice Chair of the INL CAB, shared that the board is putting together a simple summary for presentation to the CAB in order to categorize different concerns, and compare it to the Idaho Cleanup Agreement. It provides a relative overview that people can understand.

Mr. Bohrer added that although most of their meetings are in the Idaho Falls area, the board tries to have a meeting in a different location once a year. He does not believe this has helped attendance. The information that the INL CAB receives from the site is mostly status reports on projects, which do not generate much controversy or public participation. Members of environmental groups do sometimes show up for the meetings, but there is not a lot of interest from the general public. There has been some discussion of having meetings in some of the smaller towns, but it has been difficult to locate facilities that could accommodate all of the attendees.

### PORTS SSAB

The PORTS SSAB has presented at various civic group meetings, where the board discusses its activities, the site, and answers questions.

Mr. Frances stated that controversy is what seems to bring people to meetings. Their biggest attendance occurred when there was a rumor around the county that the PORTS SSAB was going to make a recommendation on whether it was for or against the proposed onsite cell. Also, the discussion of D&D and the potential of job loss has generated more interest. The PORTS SSAB has successfully recruited people by involving children, getting them onto the site and introducing them to science.



## HAB

Mr. Hudson stated that at Hanford they have a “State of the Site” meeting, which involves decision makers participating in an open forum to discuss issues with the general public. This is organized by DOE, and not the HAB. However, the issue with these meetings is that they are not planned consistently.

Another concern with meetings in general is that most of them are scheduled during the workday, so a large part of the public is unable to attend. To help with this issue, the HAB will be holding a portion of the upcoming June meeting in the evening and scheduling the most attractive parts of the agenda during this period.

Ms. Leckband added that HAB only meets in the Tri-Cities area due to budgetary concerns. There were not a large number of attendants at any of the meetings, and that public attendance is difficult to justify when members of the public only get a five minute opportunity to speak during the public comment period.

In the past, the HAB has held information sessions, which consist of an education forum in which volunteers from tri-party agencies, DOE and representatives from interest groups provide their opinions on a focused subject. These sessions have been well attended when the HAB has been able to advertise them.

The board has tasked itself with trying to find ways to provide the public with educational opportunities. Since the HAB is a representative board, each member takes information from the HAB meetings and brings it back to the organization they each represent, which allows the HAB to reach a larger audience.

Mr. Hudson added that members of his organization, Hanford Watch, used to hold informational workshops to provide information, but that the number of people finding adequate time to participate in a workshop has dwindled.

## NSSAB

Ms. Hruska stated that the NSSAB struggles with the fact that the bulk of its activities are in Las Vegas, while most of the affected citizens live in rural counties. So the board has tried to go to rural counties and metropolitan areas within those counties to draw interest. The NSSAB has proportionally drawn more people from those rural areas than Clark County.

## SRS CAB

Ms. Parson stated that SRS CAB traditionally meets at a couple different locations every year, and that has increased participation. The SRS CAB is about to hold a meeting in a new location, and the CAB is hoping to invite the Mayor to welcome the board. The SRS CAB is also considering inviting a high school group to sing the National Anthem, so that the students’ parents will attend the meeting as well.

The SRS CAB also has a Facebook page; Ms. Parson mentioned that she has used her personal page to invite people to meetings.

There is also a local, private tour company that advertises day trips to SRS, and this has brought people to the site.

Ms. Parson has found that if things are going well at the site it is difficult to involve the public. Mr. Simon added that the SRS CAB has a great following, and that when there is a hot-button issue the meetings are full.

Ms. Parson added that the Board needs to be **sure** that the information shared does not go over the heads of the public. Ms. Parson has pushed for presentations that contain zero acronyms, so that the public better understands.

### NNMCAB

Mr. Sayre believes that the NNMCAB's contact with DOE and the lab has helped to increase public participation. NNMCAB has also been advertising its meetings in the local newspaper. Mr. Sayre noted that Mr. Valdez has done radio interviews, which might be a way to engage the public.

Mr. Valdez added that using social media such as Facebook to notify friends of a meeting is a great way to get people to look at an event. He believes this has helped the NNMCAB to have a much better turnout.

### *Discussion*

Ms. Hruska asked whether the local boards would be able to get information from DOE on a generic future topic, such as future use. The boards could then use this information to engage the audience and increase meeting attendance.

Mr. Hudson echoed Mr. Hicks' desire to involve youth, and mentioned that he has served as a judge for a chemistry session which has given him an opportunity to talk with students about what he does. The HAB also makes sure that if there are questions and feedback from the public the board gets all the questions answered.

Mr. Hemelright added that if the boards want to involve the youth, they should concentrate on the future of the sites.

Ms. Leckband stated that she believes that public participation is a global issue, but because of the different sizes and complexities of the sites, it may be handled differently at each site. She would like to see a dialogue at the next Chairs' meeting to find out whether any of the boards tried a public participation tactic heard at this meeting, and whether it was successful.

Mr. Bohrer asked whether the issue is adequate public involvement to allow the Boards to effectively advise DOE, or whether the public does not know enough about DOE to be able to form an intelligent opinion. He stated that the latter does not, in his opinion, fall within the scope of the SSAB. He then asked how the local boards would get the resources to try these new tactics.

Mr. Borak stated that the boards do have an obligation to provide recommendations or advice to DOE, but not necessarily to educate the community. Part of the DOE mission involves outreach and DOE will continue to interface with the SSAB. DOE spends a lot of energy and time at the staff level doing outreach, so he believes that this responsibility should primarily be left up to DOE.

Ms. Leckband added that even though it may not be each board's responsibility, she does think that the local boards should work with DOE to reach more of the public.

Mr. Simon asked whether the DOE Office of Public Affairs office could help fund newspaper ads for the boards.

Mr. Borak responded that the CABs could make recommendations on how the Office of Public Affairs should allocate money.

Mr. Griffith added that each board should try to recruit three members under thirty. He stated that if the boards are not involving youth, the boards are missing an opportunity to gain different perspectives because those under thirty have a different way of thinking, interacting and communicating.

Mr. Peterson added that this is a challenge because this age group is most likely at the child-rearing age, and at work during the day, so an all-day board meeting may not be conducive to their lifestyle.

## **Day Two: Thursday, April 24, 2014**

### **DOE HQ News and Views**

Mr. Borak discussed organizational changes at EM HQ. Mr. Huizenga once again holds the title of Acting Assistant Secretary. He will soon leave EM to return to his former position at NNSA. Dr. Monica Regalbuto has been nominated to replace him; her hearing has not yet been scheduled. Dr. Beth Robinson has been nominated to be the new Under Secretary for Management and Performance, which includes EM. EM had previously reported to the Under Secretary for Nuclear Security.

Mr. Borak mentioned that many people in EM are currently in acting positions:

- Mr. Jim Owendoff is the Acting Principal Deputy Assistant Secretary (EM-2). EM-2, which handles the mission support of EM, includes the Office of Program Planning and Budget, Office of Safety, and the Office of Acquisitions and Contracts.

- Mr. Craig is the Acting Associate Principal Deputy Secretary (EM-2.1). EM-2.1 covers site remediation, waste disposition and transportation, and tank waste.

Ms. Candice Trummell is the new director of External Affairs (EM-3). EM-3 includes the Office of Communications and the Office of Intergovernmental and Community Activities (which houses the EM SSAB).

Mr. Borak believes that changes in personnel at EM HQ do not – and should not – affect the EM SSAB. The EM SSAB is an institution that will be around for years to come. He added that the EM SSAB is of importance to those working in EM, whether they are in permanent or acting positions. Secretary of Energy Dr. Ernest Moniz has a keen interest in advisory boards, and he has read through the EM SSAB’s membership packages to make sure the boards are balanced. He also reads the board’s recommendations.

Mr. Borak mentioned that EM is supportive of President Obama’s proposed budget, and is optimistic that EM will receive the funding it needs. He encouraged board members to send HQ information that they want added to the online EM timeline so that EM can promote its past and ongoing work.

### **Groundwater Demonstration (PHOENIX) - Mark Triplett**

Mr. Mark Triplett and Mr. D.J. Watson of the Pacific Northwest National Laboratory’s (PNNL) Risk and Decision Sciences Group gave a brief presentation and demonstration of the PNNL Hanford Online Environmental Information Exchange (PHOENIX). Additional information on PHOENIX can be found at: [phoenix.pnnl.gov](http://phoenix.pnnl.gov).

PHOENIX is a set of web-based Geographic Information System (GIS) tools that provide access to environmental monitoring data at the Hanford site. It does not require specific software or additional training; all of the applications are open to the public, except for the tank farm applications, which should be available at a later date.

DOE Richland’s groundwater project has supported the PHOENIX applications for the past three and a half years, which has included several stages of evolution.

The Hanford site has an enormous amount of data, but it is difficult to access and it is fragmented among multiple databases. PHOENIX is working to resolve this issue by tapping multiple databases and presenting the information in a useful and intuitive manner. A key benefit of PHOENIX is its ability to build trust and transparency in the cleanup process.

Generally, contractors maintain separate databases for environmental samples, the technical analysts collect the data and prepare paper reports, and then those reports are published. This labor intensive process also means that the public and stakeholders only see what technical analysts have provided and are not able to explore the information on their own.

The PHOENIX model uses an intuitive geospatial interface through a web browser. If a user defines needed information from separate databases, the Web tool gets the information needed

and presents it to the user. A key aspect of PHOENIX is that multiple data sets and GIS layers are brought together to make hidden data more apparent. Also, all of the graphics, charts, maps and tables link together. PHOENIX also enables contractors to retain control and configuration of all of the data, so that PHOENIX's applications are accessing the most current data from the contractors.

The PHOENIX team is currently developing new applications for the tank farms in response to the interest in potential leaking tanks at Hanford. DOE's ORP asked PNNL to apply its technology to tank farms and to make the information more transparent to the public. Last year, Mr. Triplett and Mr. Watson created an initial application using information that has been available to the public through the Tank Waste Information Network System (TWINS) and applied it to the same types of tools they had used for PHOENIX previously. The team is hoping to make this available by the end of 2014.

The PHOENIX team also worked on an application related to monitoring around the Fukushima Daiichi Nuclear Power Plant in Fukushima, Japan, plant. PHOENIX was one of the options proposed to the Japanese government of on how to make information on the effects of Fukushima more transparent to the public.

Mr. Triplett then walked the Chairs through several of the PHOENIX applications.

### *Discussion*

Ms. Bienenstein asked about the cost and maintenance of PHOENIX. Mr. Triplett responded that the original PHOENIX application was a \$600,000 investment made by DOE Richland. The annual report cost a bit more, and the PHOENIX team is currently working on an addition of features that Mr. Triplett estimates to be an additional \$600,000. The annual upkeep and maintenance of the GIS servers is estimated to be about \$20,000-\$30,000.

Ms. Bienenstein followed up by asking how many people use PHOENIX. Mr. Triplett responded that many people at Washington's Department of Ecology use the system. The PHOENIX team has also given tutorials to Native American tribes and the HAB, and has received a number of queries from the State of Washington.

Mr. Hemelright asked how frequently the data are updated, and how often the wells are sampled. Mr. Triplett responded that the sampling of the wells varies, and that some are sampled quarterly, while others are sampled every three years, depending on the purpose of the well. Once a well is sampled, there is typically a 45-day delay to get the information through the analytical database. The database is updated daily.

Mr. Griffith asked about the general security considerations the PHOENIX team has had to deal with in terms of making the data available. Mr. Triplett responded that the sampling data has been cleared and approved for public release. Quality assurance and control is conducted by the contractor of those databases. PHOENIX taps into those databases to create a visualization of the data, and is not modifying the data in any way.

Mr. Borak asked whether PHOENIX has images that demonstrate the progress that has been made at Hanford. Mr. Triplett responded that PHOENIX does have images that demonstrate the progress.

Mr. Hicks asked whether PHOENIX uses rain gauges to provide data. Mr. Watson responded that the PHOENIX team is currently working with the Hanford Meteorological Station to pull this type of data into the system.

### **Public Comment**

Ms. Pam Larson, Chair of the River and Plateau Committee of the HAB, and Executive Director of Hanford Communities, welcomed the meeting participants to Hanford on behalf of the communities and the elected officials.

She shared that Hanford Communities has a speakers' bureau that shares information with the public. So far in 2014, the speakers' bureau has arranged 40 speaking engagements for DOE and the Washington Department of Ecology to a range of groups through the region, including professional associations, Rotary clubs, and universities.

Hanford Communities also informs citizens about Hanford cleanup by creating half-hour television programs with funding from the Washington Department of Ecology, including videos about Hanford, and posts them on the organization's website.

### **Cross-Cutting Issues and Product Development: Discussion of Recommendations from the EM SSAB Chairs**

The Chairs discussed two proposed recommendations: better publicizing EM's successes and increasing funding for the EM program.

The Chairs agreed that the purpose of the draft recommendation on publicizing EM's successes is to help strengthen EM's position by educating the public about EM's site cleanup successes. The hope is that improved publicity would help to give EM more leverage to receive the necessary funding to complete more cleanup.

The Chairs discussed the importance of disseminating information about EM's successes by using local site resources to create educational documentaries for outreach. The Chairs decided to focus the recommendation on publicizing several examples of sites that have been successfully remediated and are now open to the public; the Chairs believed these examples would resonate most with the audience. The Chairs acknowledged that there is a budget-driven message behind the recommendation.

After incorporating edits and reworking the draft, the Chairs agreed to move forward with the recommendation and present it to their local boards for consideration.

The Chairs discussed a second recommendation on funding. The Chairs wanted to express to EM the importance of funding milestones. The Chairs were also concerned that there is no

contingency funding, as evidenced by WIPP's recent incidents. Escalation costs that are caused by delays increase the need for funds. Flat line funding and the fact that inflation is not accounted for have negative effects on site cleanup.

The Chairs discussed copying the Acting Assistant Secretary for EM, as well as elected local government representatives, congressional delegations, and governors. The Chairs discussed the idea of speaking as one voice, and decided to include the fact that the EM SSAB is a board of 200 members that represents many states and citizens.

Mr. Bohrer mentioned a recommendation that he had drafted about accelerating WIPP shipments. However, in light of the recent incidents at the WIPP facility, Mr. Bohrer thought it best to postpone discussing the recommendation until the EM SSAB could review EM's corrective action plan for WIPP. The Chairs decided to include a discussion of the recommendation during the product development session of the fall 2014 Chairs meeting in Idaho.

### **Closing remarks and adjournment**

Mr. Borak thanked the Chairs and EM SSAB staff for their participation in the meeting. The meeting was adjourned at 12:15 p.m. PDT.