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

PUBLIC MEETING MINUTES

Deer Creek Lodge and Conference Center
22300 State Park Road 20 – Mt. Sterling, OH 43143
November 5-6, 2013

LIST OF ACRONYMS

AMWTP – Advanced Mixed Waste Treatment Project
ARARs – Applicable or Relevant and Appropriate Requirements
ARP – Accelerator Retrieval Project
ARRA – American Recovery and Reinvestment Act
CAB – Citizens Advisory Board
CERCLA – Comprehensive Environmental Response, Compensation, and Liability
D&D – Decontamination & Decommissioning
DDFO – Deputy Designated Federal Officer
DOE – Department of Energy
DUF6 – Depleted Uranium Hexafluoride
EA – Environmental Assessment
EIS – Environmental Impact Statement
EM – DOE Office of Environmental Management
EM SSAB –Environmental Management Site-Specific Advisory Board
EPA – Environmental Protection Agency
FWF – Federal Waste Facility
FONSI – Finding of No Significant Impact
FY – Fiscal Year
GTCC – Greater-Than-Class-C
HAB – Hanford Advisory Board
Hanford – (DOE) Hanford Site
HLW – High-Level Waste
HQ – DOE Headquarters Office
IAEA – International Atomic Energy Agency
INL – Idaho National Laboratory
INL CAB – Idaho National Laboratory Site EM Citizens Advisory Board
IWTU – Integrated Waste Treatment Unit
LANL – Los Alamos National Laboratory
LLW – Low-Level Waste
MLLW – Mixed Low-Level Waste
MOA – Memorandum of Agreement
NEPA – National Environmental Policy Act
NHPA – National Historic Preservation Act
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
OMB – Office of Management and Budget
OR – (DOE) Oak Ridge Site
ORISE –Oak Ridge Institute for Science and Education
ORSSAB – Oak Ridge Site-Specific Advisory Board
Paducah – (DOE) Paducah Site
Paducah CAB – Paducah Citizens Advisory Board
PEA – Programmatic Environmental Assessment
PORTS SSAB – Portsmouth Site-Specific Advisory Board
Portsmouth – (DOE) Portsmouth Site
RCRA – Resource Conversation and Recovery Act
RFO – Request for Offer (RFO)
SC – DOE Office of Science
SNF – Spent Nuclear Fuel
SODI – Southern Ohio Diversification Initiative
SPRU – Separations Process Research Unit
SRS – (DOE) Savannah River Site
SRS CAB – Savannah River Site Citizens Advisory Board
STEM – Science, Technology, Engineering, and Mathematics
SWPF – Salt Waste Processing Facility
TRU – Transuranic Waste
WCS – Waste Control Specialists
WIMS – Waste Information Management System
WIPP – Waste Isolation Pilot Plant
WIR – Waste Incidental to Reprocessing
WTP – Waste Treatment Plant
WVDP – West Valley Demonstration Project

PARTICIPANTS

Hanford Advisory Board: Stephen Hudson, Chair; Kim Ballinger, Federal Coordinator; Sharon Braswell, Contractor Support Staff

Idaho National Laboratory Citizens Advisory Board: Herb Bohrer, Chair; Lori McNamara, Contract Support Staff

Nevada Site Specific Advisory Board: Kathleen Bienenstein, Chair; Donna Hruska, Vice Chair; Barbara Ulmer, Contractor Support Staff

Northern New Mexico Citizens' Advisory Board: Carlos Valdez, Chair; Doug Sayre, Vice-Chair; Christina Houston, Alternate Deputy Designated Federal Officer

Oak Ridge Site-Specific Advisory Board: Bruce Hicks, Vice Chair; Corkie Staley, member; David Adler, Alternate Deputy Designated Federal Officer; Spencer Gross, 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: Will Henderson, Chair; Val Francis, Vice Chair; Shirley Bandy, Martha Cosby, Sharon Manson, Members; Greg Simonton, Federal Coordinator; Julie Galloway, Rick Greene, Cindy Lewis, Contractor Support Staff;

Savannah River Site Citizens Advisory Board: Donald Bridges, Chair; Gerri Flemming, Federal Coordinator; Ashley Whitaker, Contractor Support Staff

DOE Headquarters:
David Huizenga, Senior Advisor, Office of Environmental Management
Alice Williams, Associate Principal Deputy Secretary, Office of Environmental Management
Christine Gelles, Associate Deputy Assistant Secretary, Office of Waste Management
Terry Tyborowski, Deputy Assistant Secretary, Office of Program Planning and Budget
Catherine Alexander, EM SSAB Designated Federal Officer
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Others:
Bill Murphie, Manager, DOE Portsmouth/Paducah Project Office
Robert Edwards, Deputy Manager, DOE Portsmouth/Paducah Project Office
Mr. Jeremy Harley, Senior Project Manager, Restoratives Services, Inc
Ms. Lesley Cusick, Restoration Services, Inc
Stephanie Howe, Associate Director of Human Capital and Operations for the Voinovich School of Leadership and Public Affairs at Ohio University

MEETING MINUTES

The Environmental Management Site-Specific Advisory Board (EM SSAB) met on Tuesday, November 5, and Wednesday, November 6, 2013, at the Deer Creek Lodge and Conference Center in Mt. Sterling, Ohio. Participants included EM SSAB officers and members, Department of Energy (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: Tuesday, November 5, 2013

Opening Remarks

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

Mr. William Henderson, Chair of the Portsmouth Site Specific Advisory Board (PORTS SSAB), welcomed meeting attendees and acknowledged the hard work and effort that went into planning the meeting.

Mr. Bill Murphie, Manager, DOE Portsmouth/Paducah Project Office, stated that the EM SSAB meetings are important because of the interaction between the communities and stakeholders. The Portsmouth site is important to the community of Southeast Ohio. Portsmouth still has many big clean-up decisions ahead that other sites have already made, such as onsite versus offsite disposal decisions, and proposed Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) cells. Much work remains, however, so the Portsmouth and Paducah sites need to continue working collaboratively and safely with the unions and other stakeholders.

Discussion:

Dr. Don Bridges, Chair of the Savannah River Site (SRS) Citizen's Advisory Board (CAB), asked for more information regarding the Portsmouth site's interest in new missions. Mr. Murphie responded that Portsmouth and Paducah have a unique situation in that both lease part of their sites. In 1992, Congress established the United States Enrichment Corporation (USEC), which privatized enrichment operations at Portsmouth and Paducah. In 2000, the Portsmouth Gaseous Diffusion Plant (GDP) shut down. Both of the closures significantly impact local communities.

Mr. Murphie stated that since 2000, DOE has been looking at new missions for Paducah and Portsmouth. Portsmouth has facilities that were intended to be the successor of the gaseous diffusion technologies, specifically, centrifuge technology for uranium enrichment. At Portsmouth USEC began constructing facilities for the centrifuge technology in the 1980s at a cost of $1B. Those facilities were leased to USEC, and the Portsmouth plant was then split into two sites. USEC construction has been largely suspended for several years due to

budget uncertainties. USEC has applied for a federal loan guarantee and a decision is expected imminently. If that decision is made in favor of continued construction of the American Centrifuge Plant, the centrifuge construction and the GDP deactivation and decommissioning (D&D) will occur simultaneously.

Presentation: EM Program Update

Alice Williams, Associate Principal Deputy Secretary for EM, provided an EM program update. A copy of the presentation is available at: http://energy.gov/sites/prod/files/2013/11/f4/EM%20Update%20Presentation%20by%20Alice%20Williams.pdf

Ms. Williams remarked that the EMSSAB is a unique body which has served EM and DOE well over the years. At least 70 years of work remains for EM to complete, including a large cleanup job at Paducah, as well as the vitrification of waste and the D&D at the Hanford site in Washington. Under the American Recovery and Reinvestment Act (ARRA), EM has done a lot of D&D complex-wide, but much of the work has just begun and there are many facilities that still need to be dispositioned.

EM should look at ways to do business differently, and embrace new technologies, so that Congress continues to see EM as an asset that needs funding. EM also needs to think about the next generation of workers, since EM is a sustaining part of the government portfolio. Ms. Williams said she cannot imagine EM moving forward without the involvement of the EM SSAB.

The government is funded under a Continuing Resolution (CR) until January 2014. Cash flow is extremely important, so EM is watching how money is being spent on a weekly basis. EM's budget is approximately $5B for fiscal year (FY) 2014, based on the CR, which is less than EM's request. Some sites are feeling the decrease in funds, especially SRS, Los Alamos National Laboratory (LANL), and the Office of River Protection (ORP) at Hanford.

EM had a number of successes across the complex in 2013.

Savannah River Site:

- The Defense Waste Processing Facility produced 40 canisters of glass encasing waste in August 2013, which is the most canisters the site has ever produced in one month.
- Tanks 5 and 6 are scheduled to close; the tanks have been filled with grout. The process went smoothly, working with state regulators, the Nuclear Regulatory Commission (NRC) and DOE. This was an opportunity to set the ground rules for future tank closures.
- The Saltstone Disposal Units 3 and 5 were constructed and completed about a year ahead of schedule, and $8B under budget. EM is now looking at a new salt disposal unit at the site.

Oak Ridge (OR):

- The K-25 D&D project is nearing completion; there is a path forward for preservation of

the North Tower, which speaks of the strong partnership between DOE and the Oak Ridge community. Under the National Historic Preservation Act (NHPA), DOE has a responsibility to preserve parts of the site.

Hanford:
- EM recently released the framework document for the ORP Tank Farms, which was created with involvement from Secretary of Energy Ernest Moniz's office. The document outlines a phased approach to tank waste treatment and processing.

Idaho National Laboratory (INL):
- The next project in Idaho is the Integrated Waste Treatment Unit (IWTU). There were operational disruptions in June 2012; since that time, Idaho has been working to address the design and operational issues at the plant.
- Lessons learned from the nuclear Hazard Category 2 IWTU will be applied to the Salt Waste Processing Facility (SWPF) at SRS.

Nevada National Security Site (NNSS):
- EM's cleanup responsibility at the site is over 56 percent complete.
- There is a DOE disposal area at the site that provides disposal capability for DOE and National Nuclear Security Administration (NNSA). This is a very important part of the DOE portfolio.

Portsmouth and Paducah:
- EM successfully demolished the X-600 Coal-Fired Steam Plant at Portsmouth and the C-340 Metals Reduction Plant at Paducah.

Los Alamos National Laboratory:
- DOE added the 375 Box Line Facility to the site.
- LANL continues to work on removing the 3,706 cubic meters of transuranic (TRU) waste from the mesa.
- Above-ground TRU waste has caused great concern because of the potential for the waste to become airborne during a wildfire. Even with budget shortfalls, work to remove the TRU waste is on track.

Over the years, EM's D&D capabilities have become more sophisticated and cost-effective. EM is working closely with the NRC to remain at the forefront of the nuclear industry. EM is learning methods to efficiently transfer waste across the U.S. Japan has shown interest in EM's activities. The relationship between Japan and EM is one that EM wants to strengthen.

EM's FY 2014 focus areas are to establish budget priorities and work with communities to establish expectations given EM's reduced funding. EM must focus on finding new innovations and approaches.

Discussion:

Mr. Carlos Valdez, Chair of the Northern New Mexico CAB (NNMCAB), asked if the IWTU

could be used to treat waste from other sites in the complex. Ms. Williams responded that currently, the ITWU's mission is sodium-bearing waste, but in the future EM will look at the feasibility of using the facility for calcine waste. If the IWTU operates with a high degree of reliability, EM will determine what waste can be brought into Idaho, treated, and shipped back for final disposition.

Mr. Valdez asked how many tanks are leaking across the complex. Ms. Williams explained that leakage rates vary, based on such things as changes in barometric pressure, humidity and temperature. Currently, some tanks are classified as "assumed leakers." The AY-102 tank at Hanford is a double-shell tank that has very small seepage from the inner tank into the outer tank. By definition, the AY-102 tank would be termed an "assumed leaker," but Ms. Williams said she prefers to call it a "seeper" instead. There are some other assumed leakers, but with the exception of the AY-102, no tanks are actively leaking.

Mr. Steve Hudson, Chair of the Hanford Advisory Board (HAB), said the HAB has been focused on leaking tanks. He is impressed with the quality of information that the HAB receives during meetings regarding this issue, as well as the amount of time and effort that EM spends tracking the various leaks, levels, and sources of changes.

Mr. Valdez asked if there is a reason that Paducah buildings are painted green. Mr. Murphie responded that the green material is a fixative that secures the asbestos siding underneath.

Dr. Bridges added that he believes that DOE should look at waste cleanup more conservatively, because it may not be viable to focus on cleaning up some of the existing waste.

Ms. Williams mentioned that DOE recently had a workshop with the National Academies of Science, Environmental Protection Agency (EPA) and NRC to discuss cleanup scope and strategies. In some cases, DOE may have done more cleanup work than necessary, out of concern for public health and environmental risk.

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/sites/prod/files/2013/11/f4/Top%20Topics%20and%20Achievements%20by%20Site.pdf.

Hanford Advisory Board – Steve Hudson

A lack of budget information from ORP has inhibited the HAB and the public from providing meaningful input, Mr. Hudson said. The HAB is expecting more detail on the framework plan for ORP that was recently made public.

The HAB issued advice recommending new tank construction. In 1994, the HAB debated this topic, but concluded that new tank construction would take funds away from the cleanup. Tank leaks continue to remain a concern, due to the potential damage to groundwater.

Ms. Williams asked whether the stakeholder community has become more varied. Mr. Hudson responded that it has, but there has always been strong public support.

Mr. Douglas Sayre, Vice Chair of the NNMCAB, asked if Hanford still expects to send some solid waste to Waste Isolation Pilot Plant (WIPP). Mr. Hudson responded that that is Hanford's goal.

Ms. Christine Gelles, Associate Deputy Assistant Secretary for Waste Management, added that in early 2013, DOE submitted a permit modification request to the State of New Mexico to allow disposal of some of the Hanford waste at WIPP. Under the New Mexico rules, there has to be a public hearing, which could take as long as two years, depending on the public feedback.

Idaho National Laboratory Site EM Citizens Advisory Board– Herb Bohrer

The IWTU is the biggest technical challenge that INL currently faces. Start-up began in spring 2012, but was halted due to technical difficulties. Startup may occur in late 2013, but there is no firm date.

The INL CAB established a public involvement subcommittee, which is creating an e-newsletter to enhance the cleanup information gap between the community and INL.

Due to budget limitations in FY 2012, the retrieval of buried waste was severely limited. As of October 1, 2013, funding was obtained and contractors resumed the retrieval of buried waste at the Radioactive Waste Management Complex. Mr. Bohrer commented that the contractors have been able to save funds and divert those savings to other parts of the project.

The governor of Idaho has formed a citizen board called the Leadership in Nuclear Energy Commission, which is focused on new missions for INL. The INL CAB is interested in future missions, but is not involved with the commission.

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

The NSSAB made 39 recommendations to the Nevada Field Office in FY 2013; the office implemented 33 of the recommendations, four were forwarded to EM, and two were declined outright.

Disposal of Uranium-233 (U-233) at NNSS remains an issue. In January 2012, Mr. John Krueger, Federal Project Director for the DOE Oak Ridge Operations Project Office, attended an NSSAB meeting and discussed bringing the U-233 shipment to Nevada for disposal. The NSSAB made a lengthy recommendation to DOE based on the information received. In June 2013, all communication from DOE concerning U-233 ceased, which concerned the NSSAB and the state.

The NSSAB is seeking ways to communicate to the public that the U-233 disposal will not present any danger to the community. Ms. Williams stated that she would share this concern

with DOE headquarters (HQ). The NSSAB has been diligent in providing recommendations, and Ms. Williams encouraged them to continue.

Ms. Gelles commented that the information provided in Mr. Krueger's demonstration was the comprehensive set of information. DOE has been working to make the information more available to the public.

Ms. Donna Hruska, Vice Chair of the NSSAB, asked about breaking down information to a lower level for EM SSAB members. Ms. Williams responded that in the past DOE has replaced some PowerPoint presentations with small-group discussions, to increase comprehension.

Northern New Mexico Citizens' Advisory Board– Carlos Valdez

The NNMCAB now consists of 21 members. This past year, the board added three student interns. In 2013 the NNMCAB developed nine recommendations, seven of which were approved. One recommendation asked DOE to analyze all technical areas for risks associated with wildfires. As a result of this recommendation, fact sheets have been developed and widely distributed.

The Consent Order, which was signed in 1995, originally had a final remediation date of 2015. In January 2012, DOE announced that the previously agreed upon deadlines could not be met. As a result, the 3706 Campaign was formed to establish short-term, clearly-defined and achievable goals. The NNMCAB is looking forward to working with DOE, LANL and the Environment Department in the renegotiations of what is left of the Consent Order.

The 3706 TRU Waste Campaign continues at LANL. In 2013 the NNMCAB focused on continued cleanup efforts associated with the 3706 Campaign, while experiencing budget constraints. Recovery Act funding helped, but did not address all of the remediation needs. LANL focused mainly on the goal of removing 3,706 cubic meters of above-ground TRU waste by the end of June 2014. Despite the government shutdown, LANL is still on target, due to the shipping of waste to Waste Control Specialists (WCS) in Andrews, Texas. At the end of FY 2013, LANL had shipped over 2,745 cubic meters of the 3,706 of waste.

The NNMCAB has also developed a letter for public comment that was included in the Environmental Impact Statement (EIS) for the storage of elemental mercury.

The NNMCAB is concentrating on chromium contamination in the aquifer at LANL. When the Consent Order was signed, the parties were not aware of a chromium plume that had developed in the aquifer. Between 1956 and 1972, between 31,000 and 72,000 kilograms of chromium-6 were released into the Sandia Canyon. Successful remediation of the aquifer will require drilling additional wells, as well as pumping and treating the contaminated water.

The NNMCAB will also focus on possible remediation options for remaining below-ground TRU waste removal in TA-54, TA-49 and TA-21, before LANL transfers land to the county.

WIPP capacity remains a high priority. The NNMCAB would like to be assured that any additional shipments to WIPP will not impact DOE's ability to fulfill its commitment to remove waste from the mesa.

Paducah Citizens Advisory Board (Paducah CAB) — Ben Peterson

The Paducah CAB and community are focused on the closing of the USEC plant, and the possibilities for development opportunities at the site. The Paducah site is currently the largest employer in the region. With USEC's closure, a projected 1,100 jobs will be lost. By February 2014, the site will be looking for new employment opportunities, but there is no guarantee that those jobs will be replaced.

The Paducah CAB understands that the decisions DOE is making for Paducah have national implications, and there are some things that DOE cannot divulge; but a lack of communication promotes fear in the community. Members are interested in discussing future use possibilities with the site and want DOE to develop a stronger relationship with the CAB.

The Paducah CAB's goal is to develop a vision for the community of Paducah. The Paducah CAB is also anticipating a decision on the Request for Offer (RFO) for use of the Paducah GDP; a decision is expected by the end of November 2013. Currently, reindustrialization and immediate D&D are the Paducah site's priorities. Innovation, technology and recycling are also very important to the Paducah CAB, which is brainstorming ways to leverage those opportunities to help rebuild the economic base of the community.

Mr. Valdez asked about the status of a contaminated water plume. Mr. Peterson responded that the plume will remain at the site. The members of the CAB see this as a success story because the plume data is showing that the water contamination is shrinking and is largely contained.

Portsmouth Site-Specific Advisory Board— Will Henderson

Mr. Henderson stated that flexibility is key to dealing with budget cutbacks. The PORTS SSAB would like to see a reduction in the dependency on the uranium barter program, including a temporary reduction in uranium sold until the price of the market recovers.

The PORTS SSAB requested consideration of a temporary funding increase that would not affect D&D operations at the Paducah site. PORTS SSAB members, with the support of the community and elected officials, would like to consolidate the existing landfills inside Perimeter Road into a closed on-site waste center. This would result in reducing ongoing legacy costs and provide more property for reindustrialization.

With regard to property transfer, Mr. Henderson stated that it would be extremely helpful if DOE, Portsmouth and the Ohio Environmental Protection Agency could begin to clear sections of the land for transfer. This would help alleviate uncertainty about what to do with the large tract of land following D&D. Unlike the other sites, Portsmouth does not have research and development at the site. Ms. Williams stated that in the near future DOE hopes to create a more concise, expedited land transfer policy.

Oak Ridge Site-Specific Advisory (ORSSAB) — Bruce Hicks

Mr. Hicks stated that DOE, OR and regulators have completed a series of groundwater workshops. The agencies have completed a strategy document of possible solutions for contaminated groundwater; the ORSSAB will comment on the document. Ms. Williams stated that OR has a more complicated hydrology than the other sites because there are larger amounts of rainfall.

Savannah River Site Citizens' Advisory Board—Donald Bridges

Dr. Bridges stated that the FY 2014 budget situation and impact on the SRS Cleanup Program is a huge issue. The SRS CAB is concerned about the High-Level Waste (HLW) Program and DOE's failure to meet Federal Facility Agreement commitments.

Ms. Williams responded that DOE HQ is concerned about the situation at SRS, which is complicated by the large line-item project, the SWPF. DOE is trying to achieve a balance between dealing with HLW, H-Canyon and the SWPF.

Dr. Bridges asked Ms. Williams about the outlook at SRS beyond 2014. Ms. Williams stated that DOE will continue to disposition plutonium at SRS through H-Canyon; Dr. Bridges stated that the SRS CAB would also like the disposition to continue. Ms. Williams mentioned that one of DOE's highest priorities is getting a new evaporator for SRS. DOE believes that SRS is a national asset.

Recognition of Departing Chairs

Departing Chairs Dr. Donald Bridges, David Martin, Willie Preacher, and Ralph Young were recognized by Ms. Williams for their service to the EM SSAB, and were given a certificate of appreciation.

Waste Disposition Strategies Update

Ms. Gelles provided an update on waste disposition activities and a brief overview of EM's disposition mapping tools. A copy of the presentation is available at: http://energy.gov/sites/prod/files/2013/11/f4/Waste%20Disposition%20Update%20by%20Christine%20Gelles.pdf

FY 2013 Waste Management Accomplishments and FY 2014 Priorities/Goals by Site

Los Alamos National Laboratory

DOE and the New Mexico Environment Department have entered into a Framework Agreement that establishes a plan for removing 3,706 cubic meters of high-risk, above-ground TRU waste from Technical Area-54 of LANL, an effort known locally as the 3706 Campaign. EM made significant progress on the 3706 Campaign in FY 2013 and met one of its milestones ahead of schedule by disposing over 1,800 cubic meters of legacy TRU waste. This

achievement is especially noteworthy as EM has received less funding for the 3706 Campaign than originally anticipated, yet still kept pace with the schedule outlined in the Framework Agreement.

In FY 2014, EM will continue to fulfill its Framework Agreement commitments by removing any newly generated TRU waste that is the byproduct of cleanup activities from LANL's Area G, no later than December 2014.

Savannah River Site

EM achieved an important milestone in FY 2013 by completing the remediation of the SRS legacy TRU waste, marking a total of over 5,000 cubic meters inventory remediated since the project began under ARRA. The final 54 cubic meters remaining at the site are currently being characterized, certified and packaged for shipment to WIPP for disposal.

Efforts to grout SRS's liquid radioactive waste tanks continue. In August 2013, SRS's liquid waste contractor began grouting Tanks 5 and 6, and will achieve closure before the end of 2013, two years ahead of schedule. Completion of Tanks 5 and 6 will mark the third and fourth tanks operationally closed at SRS in the last 14 months.

Idaho National Laboratory

INL's Advanced Mixed Waste Treatment Project (AMWTP) has continued to recover from scheduling delays that occurred during its transition from CH2M-WG Idaho, LLC, to a new contractor, Idaho Treatment Group, LLC (ITG). The remaining AMWTP scope includes some of the most challenging tasks of the project. Despite the initial schedule delays, Ms. Gelles stated that AMWTP is poised for success and cited ITG's efforts to find more efficient solutions, such as repurposing existing resources for sludge waste processing activities.

Looking forward to FY 2014, INL is on track for startup of the IWTU, which will begin treating sodium-bearing waste in the spring. Ms. Gelles noted that she believes EM is efficiently capturing lessons learned from the IWTU, which is a one-of-a-kind facility, and will use that knowledge on future commissioning projects.

Portsmouth and Paducah

In FY 2013, DOE was able to improve production rates at Portsmouth and Paducah's depleted hexafluoride (DUF6) conversion facilities. Additionally, both sites have made great strides in the D&D of new buildings, namely the X-600 coal-fired steam plant at Portsmouth and the C-340 metals plant at Paducah. Demolition of the C-340 was a significant achievement for Paducah. Despite posing a greater challenge for workers than previous D&D projects, the C-340 was the site's first uranium processing facility to come down.

Oak Ridge

The final phase of demolition at the K-25 gaseous diffusion building is progressing. Demolition began in December 2008 and will be completed before the end of 2013. This is a major achievement for the EM program that has produced many lessons learned.

OR has continued to increase its focus on the cleanup of mercury contamination resulting from historic operations at the Y-12 Plant. A conceptual design for a new mercury treatment facility has been completed. The purpose of the facility will be to capture mercury that may escape from beneath Y-12's older buildings once demolition begins, ensuring that it does not travel off site.

Hanford

In FY 2013, DOE completed the remediation of the River Corridor Cleanup Project's F Reactor Area, which is the first reactor area at the Hanford site to be fully remediated. Cleanup of the River Corridor has generated a large volume of material, 15 million tons of which has been disposed of at Hanford's Environmental Restoration Disposal Facility.

Ms. Gelles gave a brief overview of the Hanford Tank Waste Retrieval, Treatment, and Disposition Framework document that DOE recently shared with the State of Washington. Stabilizing the chemical and radioactive waste stored in Hanford's tanks is one of DOE's highest priorities. The Tank Waste Framework document outlines a phased approach for beginning tank waste treatment as soon as practicable while continuing to resolve technical issues associated with the Pretreatment and High-Level Waste Facilities.

Nevada National Security Site

Soil and groundwater remediation activities continue at NNSS, including the characterization and monitoring of underground nuclear testing contamination and cleanup of above-ground industrial sites and surface soil contamination.

Due to funding constraints, EM had difficulty fulfilling its low-level/mixed low-level waste (LLW/MLLW) disposal forecast at NNSS in FY 2013; forecasts estimated 1,338,000 cubic feet of waste disposed but DOE sites achieved 82% of that goal. Ms. Gelles cautioned that the FY 2014 LLW/MLLW waste disposal forecast for NNSS may be overly optimistic as well given the current budget environment and the possibility that some waste originally destined for NNSS may instead be sent to the Waste Control Specialists (WCS) disposal facility. While DOE's waste forecasts are built to reflect Congressional budget requests, operating under Continuing Resolutions poses a challenge.

Small Sites

- West Valley Demonstration Project (West Valley, New York, near Buffalo)

After careful characterization and the publishing of two Waste-Incidental-to-Reprocessing Determinations, EM is moving forward with the disposition of three large components from

the West Valley Demonstration Project's (WVDP) HLW treatment system – a vitrification melter and two large associated vessels – that will be shipped to the WCS facility in Texas.

WVDP safely demolished a four-story facility known as the 01-14 Building. This task was significant as it helped prepare the WVDP workforce for the technically difficult D&D projects ahead, including demolition of the site's main plant and vitrification facility.

Construction has started on a HLW canister storage facility that will allow DOE to relocate the 275 canisters, which are currently located in the WVDP's main plant, into interim storage. This project, in addition to ongoing efforts to accelerate LLW/MLLW disposal, will enable the site to tackle other high priority activities, such as the scheduled D&D of the main plant.

- Separations Process Research Unit (Niskayuna, New York, near Schenectady)

EM recently met a major regulatory milestone at the Separations Process Research Unit (SPRU) by completing construction of enclosures and ventilation systems required for cleanup of the process facilities known as Buildings H2 and G2. Ms. Gelles explained that two unplanned weather events occurred in fall 2010, resulting in a low-level release of contamination at H2 and G2, which halted remediation and D&D work. Although neither of the events presented a threat to public health or the environment, the setback on D&D progress was significant.

In addition to the H2 and G2 D&D, EM has started processing SPRU's tank sludge and expects to generate approximately 20 containers of stabilized LLW for disposal at the WCS facility.

- Moab, Utah

In FY 2013, EM shipped over 695,000 tons of uranium mill tailings from Moab to an engineered disposal cell near Crescent Junction, Utah. This project is notable because it was not undertaken to comply with regulatory drivers, but, rather, at the direction of Congress. Shipments began under ARRA, but have since been curtailed as Recovery Act funding came to an end. Ms. Gelles recognized the shipment campaign's Federal Project Director and staff for finding operational efficiencies and other ways to retain the trained workforce despite current fiscal constraints.

<u>TRU Waste Update</u>

In FY 2013, WIPP emplaced over 5,000 cubic meters of TRU waste. Furthermore, the majority of TRU waste shipments occurred on schedule (89%), despite occasional instances of inclement weather or unscheduled maintenance outages. In FY 2014, DOE will continue to optimize the TRU waste program by adding OR as a generator site and integrating its shipment needs with those of LANL, INL and SRS.

Ms. Gelles provided an overview of EM's recent TRU shipment history, which peaked at 1,194 shipments in 2010 under ARRA. In 2013, 769 TRU waste shipments took place, reflecting the availability of the waste inventory ready for shipment and the constrained budget environment. DOE has resumed development of its updated National TRU Waste Management Plan, which will integrate site-specific waste management planning with the waste handling and disposal capabilities of WIPP over a five-year horizon. WIPP currently receives an average of 17 shipments per week and will likely remain at that level in the near-term based on the foreseeable budget estimates. Ideally, the program would like to reach a level of 26-30 WIPP shipments per week to meet the generating sites' actual needs.

In response to a question from Dr. Bridges, regarding a closure date for WIPP, Ms. Gelles reported that DOE is in the process of revising its lifecycle baselines to extend WIPP's operations from the original closure date of 2030 to sometime during the 2050s, in order to accommodate TRU waste from Hanford and other potential mission needs and inventories. Mr. Valdez and Mr. Sayre expressed concern regarding WIPP's disposal capacity and the impact that those potential future missions may have on current generator sites' cleanup efforts.

Ms. Gelles underscored EM's commitment to meeting the TRU waste milestones outlined in its agreement with the State of New Mexico; LANL's TRU waste shipments are a top priority. She also explained that WIPP's physical capacity is much larger than its statutory capacity, noting that the current statutory capacity is sufficient for EM's projected TRU waste inventories. Additionally, there is a permit change request currently pending that will allow DOE to reconfigure WIPP Panels 9 and 10 to make better use of the facility's existing footprint. Any shift in WIPP's mission or acceptance criteria to accommodate other, non-TRU waste streams would require significant regulatory changes.

LLW/MLLW Forecast Data

EM coordinates an annual collection of DOE-wide lifecycle LLW/MLLW data and publishes the information in its web-based Waste Information Management System (WIMS). The WIMS database is open to the public can be accessed at www.emwims.org.

Ms. Gelles cautioned that WIMS has not been updated with FY 2014 LLW/MLLW forecasts and that the available FY 2013 data was predicated on funding baselines that never came to fruition. The FY 2013 actual figures and preliminary FY 2014 projections will be published in the near future as WIMS undergoes its annual update.

Commercial Disposal Options

Although EM prefers to dispose of LLW/MLLW in DOE facilities, an increasing number of cost-effective commercial disposal options have become available. Ms. Gelles provided a brief overview of the EnergySolutions facility in Clive, Utah, and the WCS Federal Waste Facility (FWF) in Andrews, Texas. In particular, she highlighted the WCS FWF, which offers on-site rail access, treatment and storage capabilities. The WCS FWF is a commercial facility dedicated to DOE waste and is unique in that its long-term oversight and control will be

transferred to DOE upon closure, fulfilling a regulatory agreement between the Department and the State of Texas. Nine DOE sites have approved WCS shipment programs; additionally, Savannah River Remediation, LLC, and Savannah River Nuclear Solutions, LLC, are in the process of becoming certified for shipment.

Dr. Bridges asked Ms. Gelles to comment on what drives EM to utilize commercial waste disposal alternatives. Ms. Gelles explained that in practice, DOE looks at two criteria to determine whether commercial disposal is advisable: 1) Is it more cost-effective? 2) Does it create a previously unaccounted for future liability? The criteria are under review as the Department works through its revision of DOE Order 435.1. The final revision is likely to require the evaluation of off-site disposal paths based on whether the waste meets the compliance and acceptance criteria of a particular disposal site, and what best serves the project's lifecycle costs and schedule interests, assuming all other technical factors are equal.

Mr. Hicks asked Ms. Gelles to comment on who would take responsibility for the WCS facility in the event that community acceptance shifts or the company goes into default. Ms. Gelles replied that the State of Texas is responsible for decommissioning the facility. When the FWF was established, WCS was required to create two funds: one for facility decommission and another for perpetual care. DOE's agreement with the State of Texas and WCS is predicated on the facilities transferring to the Department at no cost. When the facility is closed and the license terminated by the State of Texas, the two funds established by WCS will be transferred to DOE and used to administer long-term stewardship responsibilities. If community support ends and an order of closure is issued, the FWF will transfer to DOE. Similarly, if WCS goes bankrupt, the State of Texas will close the site, terminate the license, and the FWF will still transfer to DOE.

<u>Other Program Updates</u>

- Greater-Than-Class C LLW EIS

The final EIS for the Disposal of Greater-Than-Class C (GTCC) LLW is under Secretarial review; EM's goal is to publish the final EIS in early 2014. In the EIS, DOE proposes to construct a new facility or use an existing facility for GTCC disposal, analyzing a range of methods including deep geologic repository; intermediate depth boreholes; enhanced near surface trenches; and above grade vaults. The initial draft EIS did not identify a preferred alternative, which helped spur dialogue among local communities to collaborate with DOE on a solution. One result of that dialogue is that the State of New Mexico has volunteered to be a part of the preferred alternative. Ms. Gelles noted that while WIPP may play a role in the final strategy, GTCC waste is not a homogenous inventory. Ultimately, the preferred alternative will likely involve a hybrid of disposal methods and facilities depending on how the various GTCC waste stream subsets are characterized.

- Mercury Storage EIS

In September 2013, EM published a supplement to its EIS for the Final Long-Term Management and Storage of Elemental Mercury, which evaluates three additional locations

for a storage facility, both near WIPP. The original Mercury Storage EIS analyzed the potential environmental, human health and socioeconomic impacts of elemental mercury storage at seven locations. Based on these factors, DOE identified the WCS site near Andrews, Texas, as the preferred alternative for long-term management and storage of mercury. Since publication of that final Mercury Storage EIS in January 2011, DOE has reconsidered the range of reasonable alternatives, leading to the 2013 supplemental EIS. However, the preferred alternative of WCS remains unchanged.

- DOE 435.1 Update

The update of DOE Order 435.1 is currently under review with the Office of General Counsel. EM would like to publish the revised Order for public comment. Doing so goes above and beyond standard Departmental review practices for internal policy documents. Ms. Gelles has also proposed the possibility of drawing on the EM SSAB as a sounding board for the revised Order and holding a meeting or webinar dedicated to this topic in the future.

Disposition Mapping

Ms. Gelles concluded her presentation with an overview of waste disposition summaries for each site and maps created to help users visualize EM's waste stream data. Examples included maps depicting which sites have TRU waste and HLW/spent nuclear fuel inventories, and which have on-site CERCLA cells, regional disposal facilities, etc. Additionally, Ms. Gelles demonstrated the Geographic Information System mapping and report capabilities of WIMS, which is limited to MLLW and LLW data.

Educational Session #1: Panel Discussion of DOE's National Recycling Policy

Panel Participants:

- Mr. Richard Meehan, Deputy Director, NNSA Office of Nuclear Material Integration
- Ms. Christine Gelles, Associate Deputy Secretary for Waste Management
- Mr. Jeremy Harley, Senior Project Manager of the Restoratives Services, Inc.

Richard Meehan, Deputy Director, NNSA Office of Nuclear Material Integration

Mr. Meehan discussed the moratorium and suspension policies related to release of scrap metal from the DOE Radiological areas and DOE's strategy for revising the suspension policy on clean (including decontaminated) metal that prevents its recycling. Both policies were instituted in 2000. A copy of the presentation is available at: http://energy.gov/sites/prod/files/2013/11/f4/Presentation%20on%20Suspension%20on%20Release%20of%20Uncontaminated%20Scrap%20from%20DOE%20Radiological%20Areas%20by%20Richard%20Meehan_0.pdf

The moratorium policy covers only metals contaminated in volume through activation or melt consolidation, and it was intended to remain in place until NRC published "national consensus standards," which has not yet occurred. The suspension policy applies only to scrap metals managed in a radiological area per the definition of 10 CFR 835, Occupational Radiation Protection, on or after July 13, 2000, regardless of the radioactive characteristics. The suspension policy was to remain in effect until improvements could be made to the radiological clearance process and a National Environmental Policy Act (NEPA) process could be undertaken to incorporate public input. A change to the suspension policy raised concerns about the lack of objective standards across sites concerning the materials as well public concerns about the path of recycled radioactive material.

The suspension policies have impacted site operations. Confusion remains concerning the materials covered by the policy, a lack of a standard to measure compliance, and other related issues. One estimate puts the cost of suspension at $70-200 million, primarily due to management and storage costs for the metal.

EM, NNSA, and the DOE Offices of Science (SC) and Nuclear Energy (NE), evaluated several site radiological clearance programs for compliance with performance improvements mandated by the suspension policy. Conformance with these improvements was cited by former Secretary of Energy Steven Chu as a rationale to proceed with a modification of the suspension policy to allow sites to resume release of uncontaminated scrap metal from radiological areas. An action memorandum was signed by Secretary Chu in September 2011, authorizing DOE to proceed with the Programmatic Environmental Assessment (PEA), which would allow each Under Secretary to determine whether sites were ready to resume release of uncontaminated scrap metal encumbered by the suspension policy. The memorandum also established a DOE HQ inter-programmatic staff function to provide continued guidance and support to site radiological clearance programs. Representatives from EM, NNSA, SC, and NE provide this support. The moratorium (e.g., volumetrically contaminated metals) policy was not covered by the PEA.

The Draft PEA has been completed, public comments received and reviewed, and a comment response document prepared for presentation to Secretary Moniz for consideration. Ms. Williams added that as a result of the suspension, there was uncertainty as to whether materials that were thrown out were actually disposed of. There are indications that some of the waste material was recycled because of local prohibitions (e.g., ordinances) against disposing of recyclable materials and some landfill operators did not understand the DOE suspension policy scope or requirements.

NNSA hosted an inter-site workshop in April 2010 to develop consensus on how sites were to consistently implement the performance improvements mandated by the suspension policy memorandum. This consensus forms the basis for compliance with the aforementioned process improvements and is the benchmark for Undersecretaries to consider allowing sites under their cognizance to resume release of uncontaminated scrap metal. Mr. Meehan noted that DOE and NNSA have worked diligently to develop a path forward to constructively modify the suspension policy to allow the release of materials that have been monitored and objectively determined to be compliant with both DOE and international standards.

Mr. Meehan stated that it is important that individual sites understand the seriousness of releasing materials from control. The records have to be defensible and are subject to audit and verification by a third party.

CERCLA and Resource Conservation and Recovery Act (RCRA) closure projects were specifically excluded from the PEA because individual projects undergo separate NEPA evaluation as part of the regulatory approval process. This ensures the unique challenges of the individual projects are considered in the decision to release scrap metals from these projects into general commerce.

Discussion

Dr. Bridges asked Mr. Meehan to explain the consideration of third party reviews to maintain standards of performance. Mr. Meehan responded that when a documentation package is put together to support the release of items, an interested third party should be able to objectively review the package and conclude that data collected to support unrestricted release is credible. The gaseous diffusion plants (e.g., Paducah/Portsmouth) present unique opportunities for high financial returns for incorporation of recycle into waste disposition planning due to the large amount of copper in electrical equipment and cabling that could be salvaged.

Mr. Valdez asked who the ultimate customers of recycled scrap metals would be, especially concerning materials at Sandia and Los Alamos. Mr. Meehan responded that the competitive process is used to make this determination. In the case of a recent disposition of excess cable at the Nevada Nuclear Security Site (NNSS), several firms tendered bids for the material. Which customers receive the material depends on the responsiveness of the bid to technical requirements as well as the price offered. DOE/NNSA makes a best value determination to decide which bid to accept.

Christine Gelles, Associate Deputy Secretary for Waste Management

Ms. Gelles discussed DOE's national recycling policy. A copy of the presentation is available at:
http://energy.gov/sites/prod/files/2013/11/f4/Discussion%20on%20DOE%E2%80%99s%20National%20Recycling%20Policy%20by%20Christine%20Gelles.pdf

Ms. Gelles noted that there are inconsistencies in recycling across the DOE complex. For example, at Hanford, there is a commercial mixed-waste processing company, Perma-Fix Northwest, that takes large components and re-sizes them. During this process, the company may get large pieces of waste containing metal from DOE. If a portion remains contaminated by transuranic elements after the cutting process, it is sent back to Hanford for storage until DOE can disposition it. If the company finds LLW, it is shipped back to Hanford and disposed of at the Environmental Restoration Disposal Facility (ERDF). If DOE gets the exact same kind of metal component from Energy Northwest, the LLW components are shipped to U.S. Ecology while clean metal components are released to a local recycler. These inconsistencies confuse the public. The public believes that material DOE throws out stays thrown out, and that the suspension policy means that no clean metals from DOE restorative sites are being released, which is not the case. The material cannot be given to an unlicensed entity, but it can be sold to a licensed entity, and if it meets release criteria, it can be released.

EM is awaiting the completion of the PEA and the issuance of the Finding of No Significant Impact (FONSI). At those sites where there will be CERCLA decision-making frameworks, EM will follow those frameworks consistent with the principles of the PEA.

EM's intent is to provide a centralized team that works with the radioactive plan team to ensure that all EM site property management programs are carefully reviewed and that the requisite

actions in the secretarial memo are followed. The only EM site programs that have been reviewed, with the help of Mr. Meehan, are those at Portsmouth.

There is a potential inventory of 30,000 tons of volumetrically contaminated nickel at the OR, Paducah, and Portsmouth sites. Several years ago EM was on the verge of a controlled sale of the nickel at OR and Paducah; the plan was that whoever purchased the nickel would have to declassify and decontaminate it, turn it into an end-use product to be used in a completely regulated environment, maintain the chain of custody throughout its lifecycle, and dispose of the nickel as radioactive waste at the end of its useful life. However, the sale was not going to be profitable for the agency, and so the sale process was terminated.

Language in the Portsmouth D&D contract requires Fluor, the contractor, to evaluate the feasibility of potential decontamination and recycling of the nickel. Fluor conducted research and a market analysis on the feasibility of decontaminating the nickel to allow for its release, reconfiguration and reuse under a policy framework, so that it could be used for an ultra-pure application that could potentially earn a significantly higher dollar value. Fluor found that while there may have been a technical path forward, there was not enough economic merit or knowledge on the end-use.

DOE agreed to instead mine the nickel from the converters, and store it, which would not preclude any opportunities to recover and re-use the asset in the future. A recent Request for Offer (RFO) seeks industry input about where Paducah assets might be used. Within this solicitation EM includes the possibility of scrap metal work. It will be difficult to craft a consistent nickel strategy across three sites. The strategy needs to address the respective interests of Portsmouth, Paducah and OR, and be technically defensible. Also, NEPA evaluations will be necessary.

There is interest in battery storage for the electricity grid and in the use of nickel and nickel cadium for batteries. EM cannot move forward in light of this potential use of its nickel, however, without demonstration of the efficacy of decontamination processes. EM is not certain that current decontamination technology is adequate, because large-scale decontamination of nickel has never been attempted.

Through a Portsmouth bench scale study, EM is seeking to determine whether the carbonyl process can be successful in decontamination. EM will look at the environmental impacts of this process, as well as the impact of the electrowinning and aqueous processes, before making a decision.

Among the additional challenges, the metal industry believes if clean metals are released, it will impact the market and hurt scrap metal profitability. Ms. Gelles also noted that EM struggles with public acceptance of release of materials that have been used in radiological processes. Some believe there is a risk in reuse of formerly contaminated products. EM could go through independent verification to assure the public that only clean metals are being released, but public doubt may remain.

EM has come up with policy ideas and programmatic initiatives around public interest. It is time for DOE to have a technically defensible approach and a defensible release threshold, whether it is the International Atomic Energy Agency (IAEA) clearance standard, or a set of lower standards. EM has to demonstrate that the standards can meet and methodically defended.

Discussion

Mr. Bohrer asked Ms. Gelles to define volumetrically contaminated metal. Ms. Gelles responded that it is contaminated in the actual substance of the metal, and the contaminants cannot be washed off. The metal can be surveyed, but the contamination cannot be removed without processing to address and separate the contamination from the metal.

Dr. Bridges asked whether the decontamination has to occur at a certain level, such that it cannot be diluted. Ms. Gelles stated that deciding how clean the nickel needs to be depends on how it is going to be used, as well as the policy objectives and whether EM will be continuing to work under the moratorium or operating within some clarification of the moratorium.

Mr. Hicks asked if the regulations and criteria for recycling metals are based on the source, and not the end use. Mr. Meehan responded that it is based on the source at the point of release and that each product is defined.

Ms. Judy Clayton, member of the Paducah CAB, asked if DOE has a standard in place for the release, and what the background level would be. Ms. Gelles responded that the background levels vary depending on where the material is. EM proposed the concept that its recycled metals be cleaner than commercial nickel, which led EM to ask the Oak Ridge Institute for Science and Education (ORISE) to sample commercial nickel. ORISE found that detectable levels of technetium were not generally found in commercial samples and sometimes, when technetium was detected, the levels were even lower than background. In light of the discussion, Ms. Clayton raised the still unanswered question: how clean is clean?
Ms. Gelles noted that DOE is not yet ready to release nickel from regulatory control. RESidual RADioactivity modeling was used to set an authorized release process with specific performance objectives. Currently, DOE is only releasing material for purposes of disposal because of the suspension policy.

Mr. Meehan added that a release standard for nickel has been accepted by a regulatory agency. The State of Tennessee issued a license in 1998 for the release of nickel recovered from the diffusion plants. When the moratorium policy was instituted, members of the public argued that Tennessee was setting the release standard for the entire country.

Ms. Clayton mentioned that I-beams at the K-25 in OR are possibly surface contaminated, but not volumetrically contaminated. She asked why DOE cannot decontaminate the I-beams and put them into commerce. Mr. Meehan stated that I-beams are not valuable, and there is no economic gain in recovering them. Ms. Clayton stated that DOE should consider that technology is moving forward, and there are now processes that could provide a clean I-beam for EM.

Mr. Hicks asked if the EM SSAB can help EM approach the issue of public perception. Ms. Gelles stated that however EM decides to move forward, it will take a collaborative effort to ensure that there are no inconsistencies across the sites. Ms. Gelles mentioned that DOE is working with metals industries and community groups on the issue of recycling. She noted, in particular, that Portsmouth has a robust relationship with the Southern Ohio Diversification Initiative (SODI), which has an interest in this area.

Jeremy Harley, Senior Project Manager, Restoratives Services, Inc.

Mr. Harley discussed Portsmouth and the impact of potential changes to the DOE-recycling policies at the site. A copy of the presentation is available at: http://energy.gov/sites/prod/files/2013/11/f4/Discussion%20of%20DOEG%C3%87%C3%96s%20National%20Recycling%20Policies%20%28Impact%20on%20Portsmouth%29%20Presentation%20%20by%20Jeremy%20Harley.pdf

At Portsmouth there are 300,000 tons of metals to be removed, the vast majority of which is structural steel. About 100,000 tons of the material cannot be recycled because it is in the RAD areas. Mr. Harley stated that Portsmouth is trying to maximize the amount of metals that are recycled by defining RAD boundaries based on actual hazards rather than as historically posted for convenience of employees during plant operations. The hope is that with the issuance of the Clean Metal Environmental Assessment (EA) and the potential FONSI, those values can be incorporated into the CERCLA action.

Portsmouth has volumetrically contaminated waste, which is covered by the moratorium. Portsmouth is conducting bench-scale testing and technology review testing to check the effectiveness of a potential decontamination technology. As nickel is recovered from units, its size is being reduced to make it easier to store. This allows, pending technology studies and other activities, the resource to be used at a later date.

Mr. Meehan offered that interested board members can look up a Swedish company called Studsvik, which is a company engaged in commercial D&D of nuclear facilities. The company melts consolidated steel recovered from tile reactors into ingots that are volumetrically contaminated with Cobalt-60. Studsvik then puts the ingots into a warehouse and lets the material age off over time until it is of a sufficient level.

Discussion

Dr. Bridges asked how EM might use proceeds from nickel recycling. Ms. Gelles responded that there have been different models proposed for dealing with nickel at Paducah, including using nickel for battery storage. Batteries could be stored, put on the grid, and the price of power at the site could be offset. Also, there is the idea that once the nickel is decontaminated, it could be sold. There would then be some profit sharing with site contractors that would offset the need for appropriations. Proceeds could also be made available for investment in other community-driven projects at the site.

Dr. Bridges asked whether there were adequate incentives for recycling the metal. Ms. Gelles responded that it depends on the strategies for reuse. There is great incentive for recycling nickel if the moratorium is lifted and sellers can obtain a high price for the recycled metal. The question is how EM gets a return from, and at the same time minimizes, the agency's monetary investment in the recycling process.

Mr. Bohrer stated that in the 1980s in Idaho, the Waste Experimental Reduction Facility operated a melter, where the stainless steel from contaminated areas was melted and turned into ingots for recycling. However, it was difficult to find a use for the recycled metal. Mr. Bohrer believes that recycling rather than disposal is a concept that all the Chairs support. The big issues are whether recycling is economically feasible, and finding a technology that will render the nickel essentially clean, so that it can go into unrestricted use.

Mr. Bohrer asked whether EM has the market data for the purified material. Ms. Gelles responded that EM is considering the economic benefits in the current market environment. The results of economic analysis depend upon the treatment method and the release strategies; for instance, ultra-pure applications bring a higher price per pound for nickel than a controlled reuse. EM would not consider nickel recycling if there wasn't the potential for a significant return. The cost of storage at OR is about $1.5M a year. The cost of disposal is estimated to be a $5M to $6M one-time cost.

Mr. Hicks added that he believes the Koch brothers recently invested heavily in nickel as a long-term investment. This indicates that nickel recycling is not an urgent issue that needs to be resolved.

Day Two: Wednesday, November 6, 2013

Presentation: DOE HQ News and Views

Ms. Alexander shared with the EM SSAB information about the kind of visibility that the Board has at DOE HQ. Recently, Secretary Moniz requested that information from the EM SSAB local meetings be included in his weekly reports, and the EM front office is frequently asking questions about the EM SSAB.

Currently the EM SSAB has increased participation and diversity. There is an impetus to creating an atmosphere where people who are new to the board and have different opinions are welcome. Ms. Alexander said that she believes that is very important to the life and credibility of the board.

If the board gets too insular and there are only a few voices, it looks like a narrower slice of the community, rather than a broad spectrum. Ms. Alexander thanked the EM SSAB members for their ongoing efforts.

Ms. Alexander ended her session with the announcement that she planned to retire in January 2014, and noted that working with the EM SSAB has been the most rewarding aspect of her career.

Presentation: Budget Update

Ms. Terry Tyborowski, Deputy Assistant Secretary for Program Planning and Budget, gave an update on the FY 2014 budget. A copy of the presentation is available at: http://energy.gov/sites/prod/files/2013/11/f4/EM%20Budget%20Update%20by%20Terry%20Tyborowski.pdf

Ms. Tyborowski began by thanking the Chairs of the local boards of the EM SSAB for their hard work. She stated that the Office of Program Planning and Budget usually does more strategic planning, but budget issues have been the main focus of the past year and, thus, her remarks would focus there, as well.

Ms. Tyborowski stated that the most difficult thing about trying to execute the EM program's mission is the uncertainty surrounding the budget.

FY 2013 began without a new congressionally approved budget, but rather operations were funded under a CR based on FY2012 appropriations.

In March 2013, Congress finally passed a funding bill for FY 2013. Unfortunately, the funding was allocated as it had been in FY 2012, among EM's thirty-two control points or "spending buckets." The work being done in FY 2013, however, was not always reflective of the work that was done in FY 2012; thus, EM spent January through April of FY 2013 seeking a "reprogramming"; i.e. permission from Congress to reroute funds to address current programmatic needs.

Complicating the situation of a CR was the congressionally mandated sequestration of funding (requiring agencies not to spend some previously allocated funds), which also was approved in January 2013, and affected the program for the remainder of the fiscal year. The CR and sequestration together resulted in annualized funding for EM of about $5.3B. The budget request had been about $5.7B.

Challenges posed by sequestration also significantly delayed the budget process for FY 2014. The delay led to less than full discussions with Congress about EM's programmatic needs. Ms. Tyborowski encouraged the Chairs to keep an eye out for the caucus briefings that site managers give to Congress in the current fiscal year, which will be more detailed than the past year's. Because Congress did not pass a new budget nor approve a CR for FY 2014, the fiscal year began with a 16-day "government shutdown" that curtailed operations across agencies. EM was fortunate to have had funding to continue basic operations through the shutdown; however, some of the program's contractors had to lay off employees during that period.

A new CR was put in place in October 2013 and continues through January 2014. However, it is based on the significantly lower funding level of the previous fiscal year under sequestration and is subject to the allocation of funds based on previous years' project areas.

EM's FY 2014 request is $5.622B, and Ms. Tyborowski believes there is a chance the program may receive that level of funding if a new budget is passed. EM is pursuing new projects in FY 2014, including transfer of USEC's Paducah facilities back to DOE in the spring. Funds for this transfer are included in the FY 2014 request; funds for that project are not available under the current CR.

Demonstrating that many federal agencies are experiencing similar budget situations, Ms. Tyborowski quoted an October 27, 2013, New York Times article, entitled, "Agencies Face Difficult Choices": "The fiscal year that ended September 30 was an exercise in creative accounting. Sequestration cut $1.7B from the Navy's building program, so the Navy scrounged nearly $1B from unspent money from previous years and scrapped contracts for a destroyer, a submarine and a planned overhaul of aircraft carriers, according to the staff of the House and Senate Appropriations Committee. In January, an additional $1.6B must be extracted from the same account."

"The Army deferred maintenance on 172 aircraft, more than 900 vehicles, almost 2,000 weapons and more than 10,000 pieces of military equipment. That unfinished work is piling up, along with $73 million in maintenance costs that will be exacerbated by more cuts in January. In all, the Pentagon faces $52B in cuts next year from the total requested by Mr. Obama."

Discussion

Mr. Valdez asked for clarification regarding the CR in FY 2014; a clarification of the funding status was provided.

Dr. Bridges asked whether DOE is the only agency that has carry over funds. Ms. Tyborowski responded that DOE is fortunate in that they have "no year money," which allows an agency to keep money until it is spent, rather than having to spend all funds in a specific fiscal year or forfeit them. Agencies such as the Department of Education and the Office of Management and Budget (OMB) had to furlough employees because they did not have a carryover balance.

Greeting from Dave Huizenga, Senior Advisor, Office of Environmental Management *via webcam*

Mr. Huizenga gave brief remarks to the Chairs and expressed his regret for not being able to attend the meeting in person. He recognized the importance of the EM SSAB's work, and thanked the members for their input and meaningful engagement with EM. He also thanked Ms. Alexander and the local boards for promoting greater diversity on the EM SSAB. Diversity helps to ensure that the recommendations DOE receives are reflective of a broad community understanding and values.

Mr. Huizenga acknowledged that funding for the EM program continues to be a challenging issue. However, like Ms. Tyborowski, he is hopeful that the budget outlook will improve. Despite the fiscal challenges of FY 2013, EM made significant progress in its work. After noting a number of site accomplishments, which were covered in greater depth during the earlier EM Update presentation, Mr. Huizenga expressed his interest in

learning about the local boards' perspectives on prioritizing cleanup activities going forward.

Discussion

Mr. Peterson asked for a status update on the RFO announcement for the USEC plant. Mr. Huizenga responded that the RFO review process is on track and that DOE expects to announce its selection of potential projects for further development by the end of the calendar year.

Dr. Bridges stated that the SRS CAB supports the effective usage of H Canyon and is interested in processing spent fuel and plutonium through the facility. Mr. Huizenga thanked Dr. Bridges for his comment and noted that EM had worked with OMB over the past several months to articulate the program's needs and come to a final allotment for spent fuel processing at SRS. That money became available at the end of FY 2013.

Ms. Judy Clayton, a member of the Paducah CAB, expressed her hope that DOE will support recycling, especially for nickel. Mr. Huizenga responded that DOE does support metal recycling, but the issue is complicated due to public perception that recycled materials are radioactively contaminated even when they have been decontaminated. Ultimately, DOE will need to demonstrate that metals can be recycled in a safe manner.

Educational Session #2 Community Involvement and DOE Decisions

Panel Participants:

- Mr. Greg Simonton, Strategic Planner for the Portsmouth site/ Federal Coordinator for the PORTS SSAB
- Ms. Stephanie Howe, Associate Director of Human Capital and Operations for the Voinovich School of Leadership and Public Affairs at Ohio University
- Ms. Lesley Cusick, a contractor with Restoration Services, Inc., who works with the DOE Portsmouth/Paducah and OR project offices.

Greg Simonton, U.S. Department of Energy Practices Related to Public Input

Mr. Simonton discussed public input and DOE. A copy of the presentation is available at: http://energy.gov/sites/prod/files/2013/11/f4/DOE%20Practices%20Related%20to%20Public%20Input%20Presentation%20by%20Greg%20Simonton.pdf

Mr. Simonton explained that EM SSAB members wanted to know what DOE does with input from the EM SSAB and other stakeholders. He noted that the EM SSAB is important to DOE because the Board addresses complex issues and provides effective input to EM's decision-making process. He then offered examples of public input and impacts.

Mr. Simonton said that in general EM SSAB local boards are well regarded in their communities and often recognized by other stakeholders as well informed and influential. This standing was demonstrated in preparations for the November 2013 Annual Combined Intergovernmental

Groups Meeting with DOE, where the Kentucky governor's office had the opportunity to present issues for Western Kentucky. Prior to that presentation, the governor's office contacted the local mayor's office, which in turn contacted the Paducah CAB for input. The Paducah CAB is recognized as the most informed stakeholder group in the Western Kentucky community.

At Portsmouth, one of the board's first recommendations in 2009 was to alter a draft Request for Proposal for D&D to include community values. DOE made changes to that effect and as a result the contractor that won the bid has a Community Commitment Plan, which includes outreach to schools, scholarships, and local procurements.

Recently, one of the toughest decisions for the Portsmouth community and DOE dealt with waste disposition and D&D of the site. Through analysis of data and support from DOE, the board settled on a set of recommendations that centered on reindustrialization of the site, maximizing recycling, and conditional support for some on-site disposal. This approach was followed by support from other local stakeholder organizations including multiple boards of county commissioners and local labor groups.

Mr. Simonton noted that the DOE-funded report "The Politics of Cleanup," written by the Energy Communities Alliance, is a guiding document for achieving quality engagement with the community. The document highlights ways to involve communities, tailor engagement to the local community, and incorporate community values.

Dr. Bridges asked about attendance at PORTS SSAB public meetings. Mr. Simonton responded that discussions of hot-button issues draw more attendees, while regular meetings draw between 8 and 15 people.

Mr. Simonton discussed ways to ensure that the decisions of the EM SSAB represent community values. The Paducah site engaged the University of Kentucky, and the Portsmouth site engaged Ohio University to conduct research and provide data on the views of the local communities. This information also provides the boards a solid foundation of unbiased data to utilize in their deliberations, as they seek to reflect community values.

Dr. Bridges noted that communities close to a site tend to favor projects that are likely to involve job creation. Mr. Simonton agreed, noting that job creation was one of the most important factors in decision-making at Paducah and Portsmouth.

Mr. Valdez asked about scholarship funds. Mr. Simonton explained that such funds are provided by the site contractor, which sets aside a portion of its profits for these activities, in carrying out the commitment the contractor made at the time of the contract award.

Mr. Hudson asked for advice for situations in which the public stands very strongly on a particular issue and is reflected in the EM SSAB's recommendation, but the agency makes a decision that is contrary to the advice of the board. Mr. Simonton responded that in his recent experience, DOE has been very receptive to the recommendations from the EM SSAB and considers them in decision making, even if the recommendations are not fully implemented.

Stephanie Howe, PORTSfuture

Ms. Howe discussed the Ohio University/DOE Educational Assistance Grant known as PORTSfuture. A copy of the presentation is available at: http://energy.gov/sites/prod/files/2013/11/f4/Ohio%20University%20Community%20Study%20Presentation%20by%20Stephanie%20Howe.pdf

PORTSfuture is a series of activities that include widespread citizen involvement, Science, Technology, Engineering and Mathematics (STEM) initiatives for high school and college students, and business start-up assistance for entrepreneurs. There are also components focused on site cleanup activities that include public education and training, development of solutions to existing environmental concerns, economic impact analysis of, wildlife habitat characterization, PCB sampling, and groundwater model verification.

Additional information on all grant activities can be found at www.portsfuture.com.

The PORTSfuture project is completing its fourth year of activities and is funded by a grant from the DOE Portsmouth/Paducah Project Office. The project interacts extensively with the Portsmouth site and its contractors, the Ohio EPA, the Portsmouth SSAB, and SODI, as well as with the general public. The overarching goal of the PORTSfuture project is to provide a public voice on future (post-cleanup) activities at the site.

The grant began in 2010 with the PORTSfuture community outreach project that engaged hundreds of community members from the surrounding labor market in developing possible future-use scenarios for the Portsmouth site. The summarized results of the PORTSfuture project, including the public preferences that emerged from the community voting process, have been submitted to DOE for consideration as it makes cleanup and risk reduction decisions about the site. The project does not have a stake in the outcome of its work; rather, it provides independent, community-driven, and grassroots data that can then be used by stakeholders and decision-makers. The project sought input from a wide variety of community interests, such as business, local government, environmental advocates, and the public at large. The focus of the project was the four counties nearest to the Portsmouth site, which consist of rural areas with high unemployment rates.

The PORTSfuture outreach project spanned 15 months and was divided into three phases. Phase 1 focused on education about the site, the cleanup, the federal processes, and the operation of the PORTS SSAB. The project sought to obtain a sense of where the community stood on issues relating to the site, and to prepare the community to become involved. This information was obtained from civic meetings, farm bureaus, chambers of commerce, county fairs, press releases and radio segments. Phase 1 also focused on branding the project through the use of a consistent logo and design, and media packets.

Initial interviews and focus groups were conducted with key individuals throughout the region, such as community leaders, elected officials, DOE managers and site workers, in order to gauge knowledge and perceptions of the site and level of trust toward the agency. Responses drove the design of a telephone survey that covered the four targeted counties.

The most pressing issues that were identified in Phase 1 were community concerns about the economy and perceptions about the role that the site could play in improving the employment outlook.

Phase 2 focused on community involvement sessions, where participants were provided with a significant amount of data about the assets and activities at the site, environmental issues, demographics of the labor market, economic conditions in the region, regulatory reports, and DOE's industry report and information developed by the Community Reuse Organization. Eventually, community visioning teams and an advisory team were formed and produced nine, individually rated scenarios for future uses of the site. In addition, the project put the different scenarios into an economic model to estimate the potential economic impact each scenario if employed might have on the community in the future.

In Phase 3, results were shared with the public, and the public was asked to comment on three scenarios. The voting process, which was conducted both online and in person, included public outreach and social media. The nuclear power plant scenario received the most votes, followed closely by green energy production, an industrial park, and national research and development. The PORTSfuture project summarized these results and submitted the report to DOE for consideration.

Ms. Howe summarized the benefits to the public of the PORTSfuture project as: 1) the use of a credible third-party entity enhances reliability; 2) the use of data and analysis enables information-based decision-making; 3) widespread community input ensures that community interests are being represented in decision-making; and 4) the process supports the DOE/EM community engagement mission. Ms. Howe also noted that Ohio University produced a documentary on the outreach project, which is available to the public via the project website.

Dr. Bridges asked whether political entities in Ohio have been involved with the project. Ms. Howe responded that representatives from Ohio's two U.S. Senators' offices, various congressional offices and the governor's office have been involved in the PORTSfuture project.

Mr. Roberts noted that the PORTSfuture study enabled DOE to get a pulse of the community. It also allowed DOE to counter outlier opinions by pointing to the informed decisions that were voiced by the community as a whole.

Lesley Cusick, U.S. Department of Energy Practices Related to Public Input

Ms. Cusick discussed DOE and public input. A copy of the presentation is available at: http://energy.gov/sites/prod/files/2013/11/f4/DOE%20Practices%20Related%20to%20Public%20Input%20Presentation%20by%20Lesley%20Cusick.pdf

Ms. Cusick began by noting the importance of listening to and engaging the public. DOE is often faced with specific decisions that can greatly impact the public; ongoing education and outreach is important. The key is to find opportunities to receive community input from a broad representation of a community.

NEPA, a cornerstone of public involvement, provides opportunities to discuss DOE proposed actions reviewed under EAs and EISs. CERCLA, which incorporates NEPA values into its decision-making processes, includes significant public involvement and an integrated community involvement process. There are also public involvement opportunities under permitting processes such as state-managed RCRA permit reviews, and other consultative processes, such as those under the Endangered Species Act and the NHPA. The ultimate goal is to arrive at informed decisions, and to create more participation, understanding and acceptance.

Mr. Bohrer asked where the Portsmouth site is in terms of the CERCLA and NEPA processes. Ms. Cusick responded that NEPA reviews are conducted as a part of CERCLA reviews, and that DOE is currently conducting remedial investigations and feasibility studies at the site.

Ms. Cusick discussed examples of public involvement with DOE. She noted the success of the Fernald Preserve, which resulted from an intensive and engaged process with hundreds of meetings, including those of a local EM SSAB. During these meetings, dozens of options were suggested and then narrowed down, so that the major problems could be focused on.

Hanford's B Reactor Preservation Project, with public support, won a historic preservation award by turning something that was planned for demolition into an asset. As a result, there is more interest in historic preservation along the Hanford corridor. Another example of this type of success is the designation of parts of Rocky Flats as a National Wildlife Refuge. Although the Refuge is not open to the public due to the Department of Interior's budget restrictions, the designation reflects the wildlife habitat protection that the public valued.

Ms. Cusick also discussed the OR East Tennessee Technology Park K-25 and K-27 Historic Preservation strategy. DOE heard and understood the public interest in historic preservation at ETTP. However, due to technical and safety reasons, DOE could not follow through with the originally agreed-to historic preservation measures, so evaluation of other alternatives took place in coordination with their NHPA consulting parties. Eventually, a Memorandum of Agreement (MOA) was signed, which included a robust variety of interpretive measures, including a grant to one of the MOA signatories. The grant to the signatory was to fund the stabilization of the historic Alexander Inn in the City of Oak Ridge, which, once renovated, will be converted into senior housing by a private-sector developer.

Ms. Cusick praised the PORTSfuture project, noting the importance of engaging the public to obtain their input regarding site cleanup, site reuse and other interests and providing that input to senior decision makers.

Ms. Cusick also discussed how the Applicable or Relevant and Appropriate Requirements (ARARs) process, a provision of CERCLA, can be used to expedite and streamline cleanup. Ms. Cusick believes that the ARARs process is valuable because a more collaborative effort leads to a more widely informed and potentially quicker cleanup decision.

Ms. Cusick explained that the objective of the ARARs process is to distill and focus the issues of compliance with other laws on substantive steps as opposed to administrative (process) steps. Focusing on substance by using the streamlined ARARs process for addressing other laws also obtains the broadest public participation possible, putting the effects of vocal, but not necessarily majority, groups into perspective.

Ms. Cusick stated that the support of the EM SSAB is invaluable and helps DOE understand what is important to the public. She noted that her presentation was designed to highlight some non-board opportunities to engage the public in DOE decision-making.

Ms. Alexander noted that the EM SSAB is unique in that it allows DOE to receive ongoing input on issues, from a body that comprises community representatives. This enables DOE to receive broader input on specific issues in a systematic way.

Public Comment

There were no members of the public present to give public comment.

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

The Chairs discussed four proposed recommendations on the topics of Metals Recycling, Cleanup Funding, Graphic Representation of Waste Disposition Pathways, and Nuclear Energy Education.

Regarding the draft recommendation on recycling, Ms. Gelles noted that it would be helpful for any letter to be precise in discerning between the moratorium and suspension. She stated that the moratorium only addresses release of metals from RAD areas within DOE facilities, not non-contaminated metals from non-RAD areas.

The Chairs debated whether the IAEA standards or an equivalent should be adopted to replace the current moratorium policy. Mr. Murphie noted that DOE already has standards comparable to the IAEA standards with subtle differences, but there is a policy in place that says that in the interim those standards cannot be used. The Chairs voted to approve an amended version of the recycling recommendation, but decided not to articulate a particular set of standards in the recommendation. Identifying a particular set of standards is not the focus of the proposed recommendation; rather, the intent is to encourage DOE to lift the moratorium on non-contaminated metals and contaminated metals that can be decontaminated safely for recycling.

The Chairs then discussed a draft recommendation to EM stating that funding for cleanup should remain a top priority for DOE. The Chairs agreed to move forward with the recommendation and present it to their local boards for consideration.

The Chairs discussed a third recommendation on graphic representation. The purpose of the recommendation is to encourage EM to develop a visual tool to educate the public about the location of radiological waste at the cleanup sites and the location where disposal for that waste is planned. The Chairs agreed to move forward with the recommendation and present it to their local boards for consideration.

Mr. Val Francis, Vice Chair of the PORTS SSAB, proposed a recommendation asking EM to increase public education on nuclear energy. The intent of the proposed recommendation is to encourage DOE to celebrate successes and to communicate the future of nuclear energy to the public. Ms. Alexander cautioned that the recommendation cannot read as marketing nuclear energy, since that is not within EM's scope of work.

The Chairs agreed that future use and education are tied together and that DOE should increase educational outreach efforts. However, they decided that the draft in its current state should be tabled, then modified, and brought to the next Chairs' meeting for further deliberation.

Board Business

The members discussed the upcoming Chairs' meeting schedule. Hosts for the upcoming Chairs' meetings are as follows:

- Spring 2014: Hanford
- Fall 2014: Idaho
- Spring 2015:Savannah River
- Fall 2015: Northern New Mexico
- Spring 2016: Oak Ridge

Closing remarks and adjournment

Ms. Alexander thanked the Chairs and EM SSAB staff for their participation in the meeting. The meeting was adjourned at 3:00 p.m. EDT.