

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

**PUBLIC MEETING MINUTES**

**Green Valley Ranch  
2300 Paseo Verde Parkway – Henderson, Nevada 89052**

**February 24, 2011**

## TABLE OF CONTENTS

Meeting Attendees .....	3
List of Acronyms .....	4
Opening Remarks.....	6
EM Program Update .....	6
Roundtable Discussion.....	11
Journey to Excellence Subcommittee Status Update.....	13
Journey to Excellence Goal 1 and Goal 2: Tank Waste and Life Cycle Costs.....	14
Tank Waste Subcommittee Report .....	16
Roundtable Discussion.....	19
Public Comment Period .....	20
Journey to Excellence Goal 6: Improving Contract and Project Management.....	21
Acquisition and Project Management Subcommittee Report.....	23
Roundtable Discussion.....	25
Journey to Excellence Goal 7: Achieving Excellence in Management and Leadership.....	26
Roundtable Discussion.....	27
Human Capital Subcommittee Status Update.....	29
Roundtable Discussion.....	30
Public Comment Period .....	30
Board Business.....	30
New Business.....	30
Closing Remarks and Adjournment.....	31
Appendix A: EMAB Meeting Agenda for February 24, 2011 .....	32

**ENVIRONMENTAL MANAGEMENT ADVISORY BOARD  
SUMMARY OF MEETING**

The Environmental Management Advisory Board was convened at 8:40 a.m. PST on Thursday, February 24, 2011, at the Green Valley Ranch in Henderson, Nevada. Chairman James Ajello introduced the Board members for the meeting.

In accordance with the provisions of Public Law 92-463, the meeting was open to the public.

Board members present:

Mr. James Ajello, Hawaiian Electric Industries, Inc.  
 Mr. A. James Barnes, Indiana University (via teleconference)  
 Dr. Frank Coffman, AECOM Government Services  
 Mr. Paul Dabbar, J.P. Morgan Securities, Inc.  
 Mr. G. Brian Estes, Consultant  
 Dr. Dennis Ferrigno, CAF & Associates, LLC  
 Mr. Keith Klein, Klein Consulting, LLC  
 Mr. John Owsley, Tennessee Department of Environment and Conservation  
 Dr. Lawrence Papay, Papay Quayle Resources, LLC  
 Mr. Willie Preacher, State and Tribal Government Working Group  
 Ms. Lessie Price, Aiken City Council  
 Ms. Jennifer Salisbury, Attorney-at-Law  
 Mr. David Swindle, Federal Services/URS Corporation  
 Mr. Robert Thompson, Energy Communities Alliance

Subcommittee members present:

Dr. Kevin Brown, Vanderbilt University (via teleconference)

EMAB Designated Federal Officer:

Ms. Kristen Ellis, DOE Office of Environmental Management

Others present for all or part of the meeting:

Dr. Chris Burrows, Washington River Protection Solutions  
 Ms. Allison Clark, DOE Office of Environmental Management  
 Ms. Kimberly Hayes, Performance Results Corporation  
 Ms. Pamela McCann, DOE Office of River Protection  
 Mr. John Mocknick, DOE Office of Environmental Management  
 Mr. Richard Moorner, DOE Office of Environmental Management  
 Dr. Mary Neu, DOE Office of Environmental Management  
 Ms. Melissa Nielson, DOE Office of Environmental Management  
 Ms. Shirley Olinger, DOE Office of Environmental Management  
 Mr. Steve Pfaff, DOE Office of River Protection  
 Ms. Elizabeth Schmitt, e-Management  
 Mr. Jack Surash, DOE Office of Environmental Management  
 Dr. Inés Triay, DOE Office of Environmental Management  
 Ms. Brittany White, Performance Results Corporation

## LIST OF ACRONYMS

APMS – Acquisition and Project Management Subcommittee	EPA – Environmental Protection Agency
ARRA / “Recovery Act” – American Recovery and Reinvestment Act	FACA – Federal Advisory Committee Act
CBC – EM Consolidated Business Center	FBSR – Fluidized Bed Steam Reforming
CD – Critical Decision	FFA – Federal Facilities Agreement
CPR – Construction Project Review	FHCS – Federal Human Capital Survey
CRESP – Consortium for Risk Evaluation with Stakeholder Participation	FPD – Federal Project Director
D&D – Decontamination & Decommissioning	FY – Fiscal Year
DAS – Deputy Assistant Secretary	GAO – Government Accountability Office
DFO – Designated Federal Officer	GC – General Counsel
DOE – Department of Energy	Hanford – (DOE) Hanford Site
EFCOG – Energy Facility Contractors Group	HAZOPS - Hazardous Operations Review
EM – Office of Environmental Management	HCS – Human Capital Subcommittee
EM-1 – Assistant Secretary for the Office of Environmental Management	HLW – High-Level Waste
EM-2 – Principal Deputy Assistant Secretary for the Office of Environmental Management	HLWTF – High-Level Waste Treatment Facility
EM-3 – Chief Operations Officer for the Office of Environmental Management	HQ – (DOE) Headquarters
EM-4 – Chief Business Officer for the Office of Environmental Management	IPABS – Integrated Planning, Accountability & Budgeting System
EM-10 – Office of Project Management	IPT – Integrated Project Team
EMAB – Environmental Management Advisory Board	JTE – Journey to Excellence
	JES – Journey to Excellence Subcommittee
	LANL – Los Alamos National Laboratory
	LAW – Low-Activity or Low-Level Waste
	LAWTF – Low Activity Waste Treatment Facility

LLW – Low-Level Waste	RMF – Rotary Microfilter
LM – Office of Legacy Management	ROD – Record of Decision
M&O – Management and Operations	SBWTF – Sodium-Bearing Waste Treatment Facility
MA – Office of Management	SC – Office of Science
MLLW – Mixed Low-Level Waste	SCIX – Small Column Ion Exchange
NAPA – National Academy of Public Administration	SRNL – Savannah River National Laboratory
NASA – National Aeronautics and Space Administration	SRS – Savannah River Site
NNSA – National Nuclear Security Administration	SST – Single Shell Tank Consolidation
NNSS – Nevada National Security Site	SWPF – Salt Waste Processing Facility
NRC – Nuclear Regulatory Commission	TPA – Tri-Party Agreement
OECD – Office of Engineering and Construction Management	TRA – Technology Readiness Assessment
OIG – Office of the Inspector General	TRL – Technology Readiness Level
OMB – Office of Management and Budget	TRU – Transuranic Waste
OPM – Office of Personnel Management	TWS – Tank Waste Subcommittee
PARS II – Project Assessment Reporting System II	USACE – United States Army Corps of Engineers
QA – Quality Assurance	WFE – Wipe Film Evaporators
	WIPP – Waste Isolation Pilot Plant
	WTP – Waste Treatment Plant

## MEETING MINUTES

### Opening Remarks

Mr. James Ajello, Chair of the U.S. Department of Energy's (DOE) Environmental Management Advisory Board (EMAB) called the meeting to order at 8:40 a.m. PST. He noted that the meeting was an open meeting conducted in accordance with the requirements of the Federal Advisory Committee Act (FACA).

Dr. Franklin Coffman and Dr. Rodney Ewing were welcomed as new EMAB members. Ms. Ellis was introduced as the new EMAB Designated Federal Officer, replacing Ms. Terri Lamb who retired in December 2010.

Mr. Ajello commented that EMAB received a tour of the Nevada National Security Site (NNSS) and the staff was very knowledgeable about DOE's Office of Environmental Management (EM) work. EMAB-specific information can also be found online (<http://www.em.doe.gov/emab>).

### EM Program Update

Dr. Inés Triay, Assistant Secretary for the Office of Environmental Management (EM), provided the Board with an update on the EM program. A copy of her presentation is available online at <http://www.em.doe.gov/pdfs/emab/EM%20Update.pdf>.

#### The EM Program Fiscal Year 2012 Budget Request

The administration has requested \$6.1 billion in funding for Fiscal Year (FY) 2012. The EM portfolio is a national responsibility and compliance is a key issue. While EM has demonstrated its value to taxpayers through significant reductions in the levels of risk and liability, its work is not complete because costs and risks will continue to increase over time.

The Office of the Inspector General (OIG) reports on EM's liability annually. This assessment drives the amount of funds in constant-year dollars that represent a liability for the taxpayer as a result of the EM portfolio. Recognition of this influence on the budget is essential as EM moves forward.

The Obama Administration, the Office of Management and Budget (OMB), and DOE are aligned in establishing a FY 2012 budget that is able to meet compliance milestones throughout the complex. Dr. Triay has asked Mr. Frank Marcinowski, the Deputy Assistant Secretary (DAS) for Technical and Regulatory Support (EM-40), to assist the EM Chief Business Officer in helping EM meet its compliance agreements and make efficient use of available funding.

#### EM Program Progress since 1989 and the Vision for the Next 10 Years

EM has had significant accomplishments over the past 20 years with the execution of the EM portfolio. Over the next 10 years, past weakness will be addressed and EM will maximize its strengths.

In 1989, there were 110 sites in 35 U.S. states identified for cleanup. By the end of FY 2010, 18 sites in 11 states remained contaminated as a result of the legacy of the Cold War.

A goal for 2011 is to reduce the footprint of the EM complex by at least 40 percent and by 90 percent in 2015. The program's vision is to complete a vast majority of cleanup by 2020. One exception is the Hanford Decommissioned Nuclear Production Complex in Washington State. While cleanup will have already occurred in other parts of the complex, work at Hanford will begin in earnest in 2020.

#### DOE Asset Revitalization Task Force

Within DOE, the Under Secretaries for Energy, Science, and the National Nuclear Security Administration have established a task force on asset revitalization. The task force will examine the reuse of DOE resources as site cleanup reaches completion; the transition of sites for beneficial opportunities; and approaches to diversify local economies and communities integral to site remediation. Opportunities can include clean energy development, environmental sustainability projects, and the optimization of open space. Resources to support the task force may be limited, but it will start with defining a DOE asset revitalization initiative and a strategic plan for advancing that initiative. The task force is a preliminary step to evaluating the reuse value and purpose of departmental assets.

Long-term success requires meaningful stakeholder engagement upfront, a clear plan for managing processes, and a cross-program approach for efficient and transparent proposal evaluation. Task Force participants will include DOE communities, tribal nations, non-profits, the private sector, and other stakeholders. The task force will engage communities, evaluate the potential for private sector investment, and leverage public sector resources.

The task force will be lead by Mr. David Geiser, Director of the DOE Office of Legacy Management (LM). EM is determining if its senior executives and key staff can assist LM and the task force by transferring its knowledge and prior accomplishments to the new group.

#### EM Program Priorities

Under the FY 2012 budget request, and to ensure that EM will be compliant for FY 2012, EM will continue to prioritize cleanup efforts based on the amount of radioactivity per unit volume.

#### *Spent Nuclear Fuel*

The K-Basins no longer contain spent fuel as 2,300 tons were moved from wet to dry storage, away from the Columbia River in Washington State.

#### *Special Nuclear Materials*

Twenty tons of plutonium have been stabilized and consolidated at the Savannah River Site (SRS) in South Carolina.

DOE is also actively engaged in the cleanup of transuranic waste (TRU) at Pit-9 in Idaho. Retrieval and dispositioning at the Waste Isolation Pilot Plant (WIPP) has occurred at more than two of the 5.69 acres.

The Advanced Mixed Waste Treatment Facility is addressing the 3,100 cubic meters of TRU that DOE needed to move from Idaho to WIPP. 65 percent of all TRU has been dispositioned. In addition, shipments today are routine and conducted safely and efficiently.

Along with spent nuclear material consolidation, DOE depleted uranium hexafluoride (DUF-6) conversion facilities at Portsmouth and Paducah are operational.

In sum, 17 sites out of the original 29 have been deinventoried of their TRU. Additionally, DOE has made more than 9,200 shipments and driven 11 million miles without any release to the environment nor injury.

Along the Columbia River Corridor in Washington State and at Hanford, the amount of Decontamination & Decommissioning (D&D) has been significant and effective.

#### *Mixed Low-Level Waste*

In 2011, the NNSS celebrated the establishment of a new mixed low-level waste (MLLW) disposal unit.

#### *Overall*

522 buildings, 798 waste sites, and 60.8 metric tons of waste will be disposed due to EM's efforts. Columbia River corridor cleanup and the plutonium finishing plant D&D will be an operation larger than at Rocky Flats in Colorado, Fernald in Ohio, and Mt. Hood in Oregon combined (relative to the amount of building D&D, amount of contaminated media remediated, and amount of waste generated and ultimately dispositioned).

DOE will continue to build its capabilities in radioactive tank waste retrieval and disposal and experience progress in other areas such as spent nuclear fuel, special nuclear materials, TRU, LLW, and D&D.

Dr. Triay stated that challenges faced by EM that once appeared insurmountable are now routinely overcome. This is clearly a tribute to EM's workforce and bodies like EMAB that have given sound advice.

#### EM Program and the American Recovery and Reinvestment Act

Out of \$6.1 billion in Recovery Act funding, \$1.8 billion has been awarded through contracts and small business subcontracts. In FY 2010, \$1.7 billion of \$6.1 billion in the base program was awarded to small businesses. This is a reflection of the leadership of Ms. Cynthia Anderson, former Director of the EM Recovery Act Program and current EM Chief Operations Officer, and Mr. Jack Surash, Deputy Assistant Secretary (DAS) for Acquisition and Contract Management. The infrastructure created by EM has generated benefits for small businesses in the base program and the Recovery Act program. As a result of the Recovery Act investment, EM's lifecycle cost savings will be an estimated \$7 billion.

The Recovery Act consisted of 94 operations and capital projects. Progress is on schedule or ahead of schedule with the exception of the certification of contact-handled TRU. This component will get back on track as needed regulatory approvals of DOE's characterization efforts are obtained.

Dr. Triay stated that EM's Recovery Act safety record is as robust as that of its base program.

#### EM Program Progress to Date



The EM Program Corporate Performance Metric Life-Cycle chart demonstrates EM's completion of activities and significant progress. Cleanup operations are governed by approximately 40 federal and state regulators. EM will meet 95 percent of 141 major enforceable milestones in FY 2010. In FY 2011, there are approximately 160 major enforceable milestones. The goal for 2012 is to meet 100 percent of enforceable agreeable milestones.

#### Funding for 11 Sites in 11 States

Dr. Triay presented the FY 2012 Congressional Request and will be available to discuss it site-by-site.

#### The EM Journey to Excellence

The EM Journey to Excellence (JTE) Roadmap consists of four program goals and three management goals. EMAB has and should continue to provide careful advice and consideration on the four program goals. Dr. Triay provided a brief overview of the Roadmap goals.

#### *Goal 1: Complete the Three Major Tank Waste Projects*

EM has made accomplishments in the completion of tank waste projects but needs to maintain its momentum to ensure success. Dr. Triay asked the EMAB Tank Waste Subcommittee (TWS) to continue its work in this area.

The vision at the Idaho Site is to complete the entire legacy cleanup by 2015 with the exception of the treatment and disposition of calcine waste that is already in solid form. The Sodium-Bearing Waste Treatment Facility (SBWTF) in Idaho will be operational this year and performing in earnest by 2012. Tank waste cleanup will be completed by 2012. There were originally 15 storage tanks in Idaho and 11 have been cleaned-up and closed. One of the four remaining tanks is empty, while the other three contain sodium-bearing waste. Once the SBWTF becomes operational, steam reforming will be used to prepare the last three tanks for closure. Completion of work at Idaho will provide EM with momentum to address challenging cleanup operations at the SRS and Hanford.

By 2014, the SRS Salt Waste Processing Facility (SWPF) will be operational. However, EM seeks to advance this timeframe based on work with the Parsons Corporation and federal colleagues at SRS.

By 2016, parts of the Hanford Waste Treatment Plant (WTP) could be operational. This would follow completion of the WTP design by 2013 and the completion of construction three years later. The full plant would be fully operational by 2019, while the Low Activity Waste, Laboratory and other major support facilities could be operational by 2016.

Dr. Triay asked the EMAB Tank Waste Subcommittee (TWS) to examine the charter issued from the WTP Construction Project Review (CPR) that occurred in November 2010. This review would be in keeping with a prior TWS examination of an enhanced tank waste strategy. The TWS was asked to analyze if the vision in the CPR makes good technical and business sense. The vision for start-up in 2016 of the LAWTF includes having a sequential initiative that starts with that facility, then the pre-treatment facility, then the HLWTF. With respect to the CPR's key success indicators, some come directly from the EM Corrective Action Plan

submitted to the Government Accountability Office (GAO) in regards to EM improvement in contract and project management.

At SRS, the tank waste strategy enlists bubblers to enable the production of 400 canisters per year rather than 200 canisters per year to increase the waste loading into glass, and includes next generation solvent for processing the salt in tanks at the SWPF. In the interim, it includes small column ion exchange (SCIX) treatment techniques in the tanks to remove cesium-137, as well as rotary microfiltration to filter out actinides in the tanks.

The approach at SRS is predicted to reduce tank waste cleanup by six years and create an approximately \$3 billion reduction in lifecycle cost. EM has adopted some enhanced tank waste strategy concepts developed at SRS for the Hanford site. The potential benefits at Hanford are even greater and EM will continue to work with EMAB to provide information and the strategic cases needed to enhance EM's tank waste strategy.

*Goal 2: Reduce Lifecycle Costs and Accelerate Cleanup*

In addition to the potential lifecycle cost savings at SRS and Hanford, EM is also examining reductions associated with contaminated groundwater remediation. An initiative to advance the program's simulation capabilities has been launched, and Dr. Mary Neu, the EM Chief Scientist, will advise on this activity.

*Goal 3: Complete Disposition of 90 Percent of Legacy TRU by the End of 2015*

65 percent of legacy waste is dispositioned at WIPP and EM has a path forward for completing 90 percent by 2015.

*Goal 4: Reduce the EM Legacy Footprint by 40 percent by the End of 2011, Leading to an Approximately 90 Percent Reduction by 2015*

Dr. Triay believes that EM will exceed this goal. When the Recovery Act activities are ultimately finished, footprint reduction levels will likely exceed 60 percent at Hanford and 70 percent at SRS.

*Goal 5: Improve Safety, Security and Quality Assurance toward a Goal of Zero Accidents, Incidents, and Defects*

*Goal 6: Improve Contract and Project Management with the Objective of Delivering Results on Time and Within Cost*

EM is still on the GAO's High-Risk List and desires to be removed. GAO's assessment provides EM with robust standards for measurement, and EM will continue to validate and ensure that the corrective measures are implemented effectively. This reflects the belief that the GAO seeks to see sustainable progress translated into improved performance.

GAO acknowledged that EM has made some improvements and recognized the positive impact of its partnership with the U.S. Army Corps of Engineers (USACE). GAO also highlighted DOE's strategic investment in the national laboratories to increase its technical prowess.

Within EM, technical depth will be furthered by the establishment of a technical management group and Dr. Neu's ability to use that group to leverage expertise in the laboratories, academia, and the private sector. The group consists of about 10 scientists from national laboratories who are working with Dr. Neu and Yvette Collazo, Director, Office of Technology Innovation and Development. EM's technical depth and breadth and portfolio of laboratory partnerships will become comparable to other offices. The portfolio currently consists of one partnership with the Savannah River National Laboratory (SRNL).

The changes that EM is making are evolutionary, as efficiencies are expanding and costs are being reduced. This must continue along with looking at transformational technologies and approaches that can address lifecycle costs and help to reduce EM's period of execution.

EM's report card with respect to contract and project management echoes the criteria for the Corrective Action Plan presented to the GAO.

Overall, the objective of these efforts to improve is to increase the efficiency and effectiveness of EM's programs to deliver higher levels of performance for the taxpayer.

Improvements brought by EM's efforts will continue. SRS was one of the negative examples noted by the GAO. In fact, EM is closing 20 tanks within the first eight years as a result of its performance-based contract management strategy at SRS. The previous baseline projected the closure of 12 tanks in those same eight years. In addition, improvements in this strategy can significantly accelerate the entire completion of the tank waste cleanup from 2024 to the 2020 timeframe. Dr. Triay stated that completing the tank waste cleanup at SRS by 2020 would be a huge accomplishment and stimulate momentum to start the processing of waste through the WTP at a large operational capacity in 2022 as is now required by the program's consent decree.

*Goal 7: Achieve Excellence in Management and Leadership, Making EM One of the Best Places to Work in the Federal Government*

Dr. Triay announced that Mr. Richard Moorner has joined EM as a senior advisor and will support Goal 7. She also recognized the EMAB Human Capital Subcommittee (HCS) for its efforts related to this goal and asked that the HCS and EMAB Journey to Excellence Subcommittee (JES) to work together to develop advice and recommendations for this goal going forward.

An essential step toward EM's maturity involves determining the program's way of doing business. EM's way of doing business needs to be consistent, and should not hinge on the political leadership in order to avoid chaos, inefficiencies, and disenfranchisement within the organization.

In closing, Dr. Triay thanked the EMAB and its subcommittees for their efforts. She acknowledged that the Board's three subcommittees – the TWS, Acquisition and Project Management Subcommittee (APMS), and combined effort of the HCS and JES – will be able to cover the share of the EM Program's JTE goals.

### **Roundtable Discussion**

Mr. Ajello was pleased to hear about senior sponsorship of asset revitalization efforts that evolved from early EMAB discussions and the concept of energy parks.

Dr. Triay will ensure that EMAB members receive the press release regarding the Task Force and have access to further understanding of this initiative.

Noting the complexity of EM's fiscal realities, schedules, and many obligations, EMAB member Mr. David Swindle asked Dr. Triay about plans for regulatory review and reestablishing milestones, especially with various Federal, state, and local agreements.

Dr. Triay acknowledges that the program's holistic outlook means that it will have to work with states and regulators, and will rely on Mr. Marcinowski to maintain this relationship. EM has recently renegotiated the Hanford Tri-Party Agreement (TPA) and consent decree, and is well positioned in that arena. The WTP is in solid shape to meet the milestones specified in the consent decree; these milestones also serve as the project milestones.

Dr. Triay noted that EM is seeking best ways to advance the LANL consent order and has increased the budget of that site to achieve cleanup by 2015. However, the effort has been hindered by a short timeline, and EM may have to work with the New Mexico Environment Department to manage funds to achieve cleanup by 2015. Discussions on how best to sequence the work are ongoing.

At the Oak Ridge site, Mr. John Owsley noted that Tennessee regulators are concerned that Recovery Act funds have not been used for compliance with the Federal Facilities Agreement (FFA). Dr. Triay asked the Consortium for Risk Evaluation with Stakeholder Participation (CRESP) representatives to meet with Environmental Protection Agency (EPA), DOE, site representatives, regulators, and the community to develop a priority list to meet the FFA commitments. The Recovery Act work has gone well and there is about \$90 million buy-back dollars due to project completion under budget.

Dr. Triay noted that efforts in Idaho are on track to meet all compliance milestones, including commitments calcine disposition by 2035. In order to complete the calcine disposition milestone, EM will look to Dr. Neu's leadership to engage technology development efforts and ensure that EM can mature static pressure technology and identify back-up technologies for contingency. This is a priority for Dr. Neu as she looks at high-level priorities and the task waste management strategy.

The program is in solid condition regarding current agreements. Compliance and business cases need to be hand-in-glove to be able to invest in further compliance when major efforts are finished. Mr. Marcinowski will be counted on to help with these discussions.

Mr. Paul Dabbar pointed out EM's development of good business tools several years ago, which were helpful when the program received more funding than expected. However, appropriations may become more compressed. Mr. Dabbar asked what tools or scenarios are being developed now to evaluate the best way to manage the business case and handle compliance issues in light of the potential decrease in funding.

Dr. Triay highlighted EM's development of analytical building blocks for strategic planning scenarios. EM's budget constraints create difficulties in terms of newly delegated compliance targets. Dr. Triay stated that finishing projects sooner rather than later will help free-up funding for further compliance commitments. The analytical building blocks will continue to serve as the basis for strategic planning moving forward. The program has run broad scenarios for all goals of

the JTE and analyzed the feasibility of the goals and the investment needed to meet those goals. EM has also analyzed different investment options and paths forward in order to create a priority list that will allow it to balance risk reduction with meeting its compliance milestones while remaining in budget. Tank waste will stay at the head of the list. Many sites such as Oak Ridge have issues with that and believe that different prioritization should be used. Hence EM is using CRESP to identify other possible schemes. It may be difficult to abandon tank waste as the highest priority due to the conditions and characteristics of the tanks. EM may need to rezone itself with respect to the portfolio at Oak Ridge and make compliance the highest priority of the budget associated with Oak Ridge.

EM also utilizes the Integrated Planning, Accountability & Budgeting System (IPABS) tool and the Project Assessment Reporting System II (PARS II) from the DOE's Office of Engineering and Construction Management (OECM). Cost, schedule, and scope in analytical building blocks are the basis of EM's strategic planning and prioritization.

Dr. Triay believes that the priorities shared today will not change complex-wide, but Ms. Olinger is helping move priorities to a site-specific vision for 2012 and 2015. EM can address specific needs for each site and use the building blocks to understand the benefits of site-level investments. EM has asked all of the sites to be transparent with budget requests, compliance needs, and opportunities for investment at a site level. Site-specific visions need to be part of the dialogue between state regulators, the EPA, and DOE.

#### **EMAB Journey to Excellence Subcommittee Status Update**

EMAB Journey to Excellence Subcommittee (JES) Co-Chairs James Ajello and Jennifer Salisbury provided the Board with a status update on their subcommittee's work. Other JES members include: Mr. Paul Dabbar, Mr. Keith Klein, Mr. John Owsley, and Mr. Robert Thompson.

Mr. Ajello noted that the EMAB will provide an independent critique as the JTE develops. The JES observed that many topics addressed by the EMAB over the past four to five years are contained therein. The JES hopes that the JTE will lead to a sustainable EM approach to its programmatic activities and that it becomes incorporated into the organization. The JES pledges to identify ways to do that.

Ms. Salisbury pointed out that integration of the JTE into EM is important, but it does not yet seem to have happened despite stakeholder support and enthusiasm for the plan. EMAB looks forward to helping Dr. Triay integrate the work that is currently being done.

As the plan is comprehensive, the JES will reorganize itself to leverage appropriate expertise from the EMAB. The JES will lose some of its membership and gain others in order to create a new Management Excellence Subcommittee.

EMAB member Mr. Owsley thanked Dr. Triay for acknowledging the challenges at Oak Ridge. He pointed out to the JES that lessons learned regarding large technical capital projects are transferrable and encouraged this consideration.

## **EM Journey to Excellence Goal 1 and Goal 2: Tank Waste and Lifecycle Costs**

Ms. Shirley Olinger, Associate Principal Deputy for Corporate Operations, provided the Board with an overview of Roadmap Goals 1 and 2. A copy of her presentation is available online at <http://www.em.doe.gov/pdfs/emab/EM%20Journey%20to%20Excellence%20Goal%201%20and%20Goal%202%20-%20Tank%20Waste%20and%20Lifecycle%20Cost.pdf>.

Ms. Olinger stated that EM has made significant progress, especially with Recovery Act funding, and has demonstrated that the program is worthy of investment. The importance of the tank waste mission has been emphasized as a critical path to completing and accelerating the EM cleanup mission.

The vision described by Dr. Triay can become a reality despite fiscal constraints in the near-term, particularly through investing in transformational technologies and proving that the program is effectively utilizing funds to minimize costs and provide value to the taxpayers.

### Goal 1: Complete the Three Major Tank Waste Projects

At Idaho, the SBWTF is 94 percent complete. Though the mission itself is less than one-year old, the SBWTF will become operational in 2011. EM is also examining ways to mature needed technologies to address calcine waste. This is part of a long-term treatment mission that relies on deploying the right technology to meet a 2035 timeline. This reflects a big change, ensuring that the technology is in place and at a Critical Decision (CD) level 4 or higher, then going through the CD-1 downselect process and maturing to a level of six or beyond before going to a CD-2 on design. The other focus is in the area of footprint reduction.

Idaho has a vision of completion by 2015, with the exception of calcine. This includes completion of sodium bearing waste by 2012. In dealing with calcine, there is a need to mature the hot isostatic pressing technology for this particular application. EM has a maturation plan to bring the technology to readiness. Dr. Neu will be involved to ensure that the plan is realistic. She holds a back-up strategy for a cold crucible induction melter that is operational in other countries for other operations and that could be used for calcine if needed.

The SWPF at SRS is 54 percent complete. SRS is dealing with an earlier AMSE vessel problem but has a good corrective action strategy focused on major vessel procurements. This is on schedule for 2013. Ms. Olinger commented that SRS has many capabilities to treat tank waste and is very well run. SRS is making good progress with existing infrastructures and its use of steam reforming.

Finally, Hanford represents the biggest challenge for the EM complex. Overall, the WTP is 57 percent complete and design is at 80 percent. Design completion requires finalizing the mixing issue and uses a strategy that foresees all design work being completed by 2013, the completion of construction by 2016, and then operation in 2019. The vision is that the WTP be fully operational by 2020.

### Goal 2: Reduce Lifecycle Costs and Accelerate Cleanup

Ms. Olinger is leading the advanced tank waste strategy for SRS and Hanford. The team addressing these solutions is investing dollars to find the appropriate technologies. The budget

was \$50 million in 2010, \$60 million in 2011, and is a proposed \$60 million in 2012 to achieve significant lifecycle savings.

Groundwater is another critical issue covered under Goal 2. Ms. Olinger noted that it is critical to figure out how to accurately model contamination in order to identify practical cleanup solutions and meet performance metrics and requirements.

### Technologies Being Examined and Used in 2011

At Hanford, supplemental treatment and secondary waste are the focus. A down-selection needs to be made in the next year or so. The technologies being used at SRS and the testing they are doing using SCIX and RMF are being integrated into the Hanford cleanup. Regulators and contractors at both sites are working together to apply lessons learned.

EM is examining its high-level waste (HLW) vitrification capacity and is also looking at other next generation melters such as advanced joule-heated, cold crucible, and iron phosphate glass to improve waste loading and help throughput and other challenging waste forms coming from the waste streams.

Another part of the enhanced waste strategy to achieve \$19 billion in lifecycle savings is single shell tank (SST) consolidation. The goal is to demonstrate that SST at Hanford has integrity and convince regulators to use these as staging tanks to avoid transferring all of the liquid. This could help accelerate the program mission by staging and gaining a greater understanding of the material early on. At SRS and Hanford, retrievals are the critical path now; previously it was treatment.

The use of hard heel retrieval technologies includes deploying mobile arm retrieval technology at Hanford to determine if it will work instead of using up to three different technologies.

Evaporators are another tool but require evaporation technology near-tank for SST consolidation. The program has been studying wipe film evaporators (WFE) and will conduct some hot testing before moving this to a pilot scale.

### Key Activities in 2011

The bench scale steam reforming systems for FSBR and the SRNL will test three samples from Hanford and three from SRS. Testing has been completed for two at each site with a third scheduled to be done by the end of February. The results are encouraging and will demonstrate if the technetium, iodine, and constituents are staying in the waste form and the durability of the waste form. The outcomes will have to be demonstrated to EM, the EMAB TWS, the scientific community, and regulators.

SCIX and RMF will continue at SRS and Hanford in 2011, and there will be testing of the engineering scale melter with an off-gas recycle loop. This presents a risk with regard to knowing the effectiveness of the recycle and technetium-99 retention in the low activity waste (LAW) glass and in the waste form. There has not yet been any substantive testing, but rather judgment on what should happen. Catholic University will conduct the lifecycle testing.

## **Tank Waste Subcommittee Report**

EMAB Tank Waste Subcommittee (TWS) Co-Chairs Dennis Ferrigno and Lawrence Papay discussed the TWS Phase 2 interim report, which did not include recommendations. Broadly defined, Phase 2 of the TWS mission asks members to evaluate technological options that could have a positive impact on life cycle costs at Hanford and SRS. TWS membership for Phase 2 of the Subcommittee's mission includes Dr. Ferrigno, Dr. Papay, Dr. Edward Lahoda, Dr. Alan Leviton, Dr. Kevin Brown, and Dr. Rodney Strand. A copy of the TWS Phase 2 interim report and presentation is available online at <http://www.em.doe.gov/stakepages/emabproducts.aspx#feb11>.

Mr. Klein recused himself from this session of the meeting.

### TWS Phase 2 Charges

There are six charges for Phase 2 of the TWS mission:

- Charge 1A: Modeling for Life-Cycle Cost Analysis (LCCA)
- Charge 1B: Assessment of Life-Cycle Cost Analyses of HLW strategies
- Charge 2: Assess candidate low-activity waste (LAW) forms
- Charge 3: Assess at-tank or in-tank candidate technologies for augmenting planned waste pretreatment capabilities
- Charge 4: Evaluate various melter technologies
- Charge 5: Evaluate the reliability of waste delivery plans
- Charge 6: Identify other tank waste vulnerabilities at SRS and Hanford

Mr. Dabbar will join the TWS to bring his expertise to charge 1B. The engagement of a regulatory expert may also be needed.

Dr. Papay noted that there is a potential for the issuance of an additional charge to address the 2020 vision for an early start-up at Hanford in the 2016 timeframe.

### Schedule

The TWS recently met at SRS and Hanford. The members' evaluation is proceeding but the gathering of information has proven to be a tremendous effort. The staff at SRS and Hanford have been responsive to requests for current and past historical documentation.

The subcommittee is scheduled to hold a second fact-finding meeting involving SRS and Hanford in the March/April timeframe, followed by report writing in May/June, and the issuance of a final draft report to the full EMAB in June.

### Review of Charge 1A

Dr. Ferrigno noted that Charge 1A entails conducting a review of lifecycle cost modeling approaches for SRS and Hanford. The task involves evaluating assumptions and systems plans for completing tank waste operations at both sites, as well as analyzing the rigor of the models for evaluating activities and costs through the end of each site's program. He then reviewed a number of potential issues and vulnerabilities identified by the TWS.



Dr. Ferrigno explained that there has been some confusion within the EM program and a lack of consistency across the complex regarding what is included in lifecycle costs. The TWS is addressing basic fundamentals and the complexity and details of the decision-making process for projects and capital costs greater than \$100 million. When viewed from a business model perspective, there is rationale and a business case for execution. In the private sector, this is based on production and profit. However, in government, this depth may not be explored.

The determination of appropriate technologies needs to account for cost to the taxpayer and the return on investment based on hurdle rate (the cost of capital). While the government does not necessarily need to factor the cost of money into lifecycle cost calculations, it does need to recognize during the decision-making process that money, time, and schedule are all impacted. Essentially, EM needs to do economics in a single and consistent way.

Technology readiness assessment is another issue and relies on guides developed within DOE. A consistent modeling of applications is needed in order for sites to have comparable standards and a similar understanding of how mature given technologies need to be in order to be applied successfully.

Technetium-99 is a key issue at WTP and will be addressed in the TWS Phase 2 workplan. Moving to a 2016 timeframe increases the urgency for this task.

The previous WTP report spoke to a consideration of Hazardous Operations Reviews (HAZOPS). This is not a risk assessment only, but rather it asks the engineer, operator, regulator, compliance officer, and others to go through process diagrams, the entire plant, and every operation that will happen and address risks, corrections, and solutions. The TWS's earlier report for WTP recommends this, and it is embraced at the site field office. It needs to be done in CD-0, CD-01, and CD-2.

The lifecycle needs to include design, construction, operations, waste disposal, D&D, environmental risk, and business risk. The private sector looks at a triple risk bottom line: the cost of construction and operation, regulatory compliance, and stakeholder involvement. The costs of construction are the upfront costs and the annuity of the operation. That is what people are looking at as lifecycle costs at these sites and in these programs. However, there are greater impacts because these projects affect things such as how much waste is being sent to other places, cleanup, and the risk of completing the mission. The movement from one area of decision to the next only adds to the risk factor. The TWS believes that there is insufficient accounting of these risks at present.

For the technology readiness assessment (TRA) and the technology readiness level (TRL) application, the TWS suggests that clarification may be needed by EM and the site for continuity. OMB requires the guideline for TRL 6 at CD-2. DOE Order 413 requires that a TRA be done at CD-2. These requirements may lead to differing interpretations. A complete decision-making process needs to be treated as a business decision and include all costs.

The enhancements at SRS and Hanford have a fundamental strategy and take into account considerations that the subcommittee applauds. When the TWS reviews a plant such as the one at SRS, it is analyzing it from a business standpoint. The TWS reminds EM to make sure that these lessons are shared and the data is collected and disseminated.

The TWS has identified a need to model consistency of risk, not only from the analytical side, but from business scenarios based on operation, technology, how the sites are feeding the streams, and how they will be operating.

By mid-2011, the TWS will have a better understanding of process definition. The subcommittee is asking DOE to seriously consider the HAZOPS approach contained in its FY 2010 WTP review. It is important for this process as well as CD-1 and CD-2. When formalized, support from a facilitator can provide significant dividends. The TWS recommends looking at the whole picture in the decision-making process even if funds are recorded in different charts of accounts / programs.

#### Review of Charge 1B – Charge 6

##### *Charge 1B: Assessment of Life-Cycle Cost Analyses of HLW strategies*

Dr. Ferrigno noted that Charge 1B looks at the potential costs of risks associated with advanced strategies and the disposition of waste. The TWS will add resources to carry this out in order to monetize risk.

##### *Charge 2: Assess candidate low-activity waste (LAW) forms*

Lifecycle cost is an important issue in assessing the candidate LAW forms. Only if you have a comparison can there be a lifecycle basis between the different ways you might be able to disposition LAW.

One issue is that both Hanford and SRS do a lifecycle cost analysis, but not in the same way. Hence, savings estimates may not have the same basis.

A second issue is the “as good as glass” issue built into the TPA with Hanford. Dr. Ferrigno stated that this standard is technically hard to evaluate and quantify.

##### *Charge 3: Assess at-tank or in-tank candidate technologies for augmenting planned waste pretreatment capabilities*

Lifecycle cost analyses are important for evaluating various technologies. The down-select process for each technology is not necessarily clear and is part of the data request to SRS.

##### *Charge 4: Evaluate various melter technologies*

There are quite a few suggested, but only two – cold crucible melting and joule-beaded ceramic melting – have been used on a commercial basis. The TRL of both is not sufficiently known as they are at various stages of development. This inhibits the ability to make a true down-select. There are also unexplored issues in terms of the true value of going to alternate melters and the impact that this would have on lifecycle analysis.

##### *Charge 5: Evaluate the reliability of waste delivery plans*

The TWS highlighted Hanford and evaporator 242A as something that could negatively impact the whole tank waste baseline program at Hanford. That relationship needs to be evaluated further. The interdependency between the WTP and the tank farm was raised by the TWS in

Phase 1. It is clear based on Vision 2020 that the integration between the tank farm and the waste tanks, especially for contractors, is a complex, interdependent issue that must be resolved prior to 2016.

In terms of the maturity of the systems in place and start-up and operation, SRS is much further along than Hanford. Some of the technologies being examined could have greater impact at Hanford as it is further back, whereas SRS has moved farther ahead.

*Charge 6: Identify other tank waste vulnerabilities at SRS and Hanford*

This charge is the least developed at this time, as the TWS has to make progress on the others to understand the impact to Vision 2020. There are risks in terms of funding, regulatory compliance, what can be defined as “good as glass,” and rephrasing it in a quantitative term. TRLs are important for a down-select process as the status of each technology needs to be known to know the status of each technology level.

### **Roundtable Discussion**

Mr. David Swindle commented that the TWS observation about developing a consistent and standard method for lifecycle cost analysis needs to be looked at both DOE-wide and within EM. GAO has focused on project management which is capital management, but has not yet focused on operating costs. EM can excel if it addresses inconsistencies now.

Mr. Owsley encouraged the TWS to consider the additional charge of framing recommendations associated with tank waste broadly as the issues found in lifecycle analysis will be found at most sites. And, if models are generated, ensure that the models are applicable across the complex.

Mr. Dabbar noted that the TWS will take a look at business risks. The funding of nuclear reactors provides an example as loans are associated with risk assessments and are at higher costs. The Subcommittee has some additional thoughts on how to assess risk especially on HLW, but the TWS will try to look at the current baseline as well as alternatives from a strategic planning perspective. The TWS can look at the complexity of technologies and the likelihood of cost overruns or an extended time to complete the project. This can take away funds from other activities, and historically EM has run into challenges in this arena. It is important from the business side to also try to evaluate the likelihood of ranges for these more complex topics and paths versus simpler technologies that may or may not accomplish some of the same things but may have a lower change on the outcome.

Dr. Triay thanked the TWS members for their work and shared her preliminary reaction to their presentation. She noted that determinations on selecting supplemental technology can be made with an interim report. Thus, the subcommittee should not feel pressured to turn in a final report by June 2011. However, if at all possible, a report is needed to present to the construction team.

Regarding lifecycle costs, Dr. Triay believes that EM has incorrectly framed technology issues with respect to the lifecycle work. She reminded EMAB that the EM program goes through an annual audit, which calculates an environmental liability number for the entire program including facilities across the complex that are not even part of EM’s portfolio. Before pressing forward, an effort needs to be made to frame this with lifecycle costs efforts that are ongoing as part of the EM headquarters (HQ) efforts to determine that the lifecycle gets translated in an

audit that gauges environmental liability. It appears that the TWS has been talking to Hanford and SRS from a technical perspective rather than with those who are lifecycle cost modelers. This needs to be framed to provide a very clear picture to the TWS, and EM needs to go back to a more fundamental understanding of lifecycle standards and how that translates into doing things more aggressively from a technical perspective.

Regarding technology maturation, Dr. Triay noted that determinations have been made by EM that have not been shared with the TWS. For example, technologies like SCIX RMF need to be matured through a technology development process even before they become part of projects on a DOE Order 413B path. In-tank equipment does not appear to lend itself well to that order but maturation is a must if that is going to be used on a bigger scale.

The construction of nuclear facilities has been the most challenging area for all of DOE and EM. Comments on certain equipment placed in-tank and maintenance of the equipment do not recognize that EM has become much better at operating and maintaining equipment than at building a nuclear construction facility and delivering that facility. Once the program finishes construction and begins operating, the program regains its prowess.

Dr. Triay noted that the decades and billions of dollars in funding appropriated to EM (not including enhancements) creates a responsibility to identify what to do with supplemental LAW that is not part of the WTP complex. Dr. Triay also offered to EMAB and the TWS that considering the hundreds of billions in funding and decades of work, it is hard to imagine that EM cannot enhance the strategy that will be used for cleanup.

### **Public Comment Period**

Comments were heard from Dr. Chris Burrows of Washington River Protection Solutions. He is responsible for the WTP support projects that include most of the enhancement strategies. Dr. Burrows noted that the major difference between SRS and Hanford is that the former is far more advanced and is allowed to process all levels of waste. Hanford is still waiting to get the WTP up and running, and has challenges with the state. Hanford is looking at a 40-year mission and needs to look at ways to enhance things now. WTP will be operating for about 30 years, and while control systems may need to be replaced as they become outdated overtime, EM should look at enhancement along with development.

Dr. Burrows noted that D&D and waste disposition are included in lifecycle costs. In projects prior to CD-1 and CD-2, parametric costs of the capital are applied to D&D; hence it is in the cost model. Dr. Burrows completed 10 system plant scenarios for DOE this year and all will have a lifecycle model. Those will be shown to EMAB for comments. Comments that provide information on what SRS is doing and what DOE is doing in EM would be valuable, stated Dr. Burrows.

Dr. Burrows noted that the technology development model is being followed. One big challenge at Hanford is double-shell tank space as there will be no more space by 2019, assuming that WTP will start and operate. Active trials will begin on the WFE after a full-scale non-active WFE is actually constructed. It should be running in April or May 2011. One deliverable this year is a full test report on the model. The WFE will be deployed in 2013 and is a way to create extra tank space as this goes through the maturation model.

The focus this year has been on much greater integration of WTP with the tank farms. This is leading to integrated schedules, how WTP's waste acceptance impacts waste feed delivery, and how to handle secondary waste. A tank farm vulnerability study is currently being conducted, noted Dr. Burrows. An assessment is being finished and will help determine how the tank farms and WTP start-up will affect the overall mission.

Dr. Burrows agrees with the comments of the TWS. However, at this stage there is not enough integration of risk analysis into the initial costs. Lastly, regarding HAZOPS, Dr. Burrows supports the TWS comments.

### **EM Journey to Excellence Goal 6: Improving Contract and Project Management**

Mr. Jack Surash, the Deputy Assistant Secretary for Acquisition and Contract Management, provided the Board with an overview of Roadmap Goal 6. A copy of his presentation is available online at

<http://www.em.doe.gov/pdfs/emab/EM%20Journey%20to%20Excellence%20Goal%206%20-%20Improving%20Contract%20and%20Project%20Management.pdf>.

Roadmap Goal 6 seeks to improve contract and project management by delivering results on time and within cost, leading to the removal of EM from GAO's High-Risk List. Goal 6 is championed by Mr. Surash and Mr. Bill Murphie, the Site Manager for the Portsmouth and Paducah Project Office.

Mr. Surash explained that GAO has asked EM to accomplish five tasks to be removed from the High-Risk List. EM has delivered three of the five. The two remaining items include building capacity to resolve problems, and monitoring and independently validating the effectiveness and sustainability of corrective measures.

A series of events occurring between 2006 and 2011 have set the stage for Goal 6. Highlights include the National Academy of Public Administration assessment of EM; the partnership with USACE for a Best-in-Class project management effort; the establishment of a Cost Estimating Center of Excellence at the EM Consolidated Business Center (CBC); the implementation of the DOE Root Cause Analysis and Corrective Action Plan; the start of a Construction Project Review (CPR) process based on the DOE Office of Science model; the restructuring of EM's project/operations portfolio; and the DOE Contract and Project Management Summit on implementing the Root Cause Corrective Action Plan and identifying a path forward. The plan that resulted from the Summit is currently in draft and will be distributed to EMAB when available.

EM seeks to improve contract and project management through a number of key strategies and success indicators. The key strategies include:

- Establishing an internal quality assurance process.
- Improving and expand the use of independent reviews.
- Strengthening the integration of acquisition and project management.
- Completing the restructuring of the EM cleanup portfolio into capital projects and operations.

- Becoming a stronger owner and holding contractors accountable via annual assessments and partnering relationships designed to ensure that the contractor and DOE workforce are aligned.
- Developing EM's ability to perform Independent Government Cost Estimates and Reviews.
- Providing training in contract and project management.
- Making effective use of small and minority owned businesses.

Mr. Surash then recounted the metrics:

- Metric 6.1: Complete 90% of capital asset projects within 10% of original cost and schedule baseline.
  - In 2010, five of five projects were completed. It is projected that 21 of 23 will be completed in 2011, and 24 of 27 projects are slated for completion in 2012.
- Metric 6.2: Maintain at least 95 to 98 percent (meets/exceeds) of project performance data reporting in IPABS/PARS II error free.
  - EM has had previous challenges with IPABS but corrections are being made. The PARS II is a new approach for the DOE that permits contractors to report directly into the system.
- Metric 6.3: Approve contract performance baselines within 180 days from contractor's final accepted submission.
- Metric 6.4: Finalize 80% of change orders within 180 days.
  - This focuses on unilateral and bilateral modifications and requests for equitable adjustment. It also includes administrative, funding, and no-cost modifications. The metric is currently reported as yellow due to some problems with some sites. The measurement process for this metric is a manual computation.
- Metric 6.5: Negotiate contract changes in advance of Acquisition Executive approval of baseline changes.
  - EM-10, the Office of Project Management, is reporting this as yellow as they are finalizing how to measure this. It will be a site level measurement.
- Metric 6.6: Manage life-cycle costs within 5% of EM current program portfolio using FY 2011 Budget and Planning Guidance.
  - This metric strives to help the program be mindful of lifecycle cost and ensure that any project and contract changes make sense from that perspective and take action that reduces contracts or funding in long-term.
- Metric 6.7: Implement [voluntary] partnering agreements for at least five major contracts in FY 2011.
- Metric 6.8: Ensure 85% of contracting series workforce has appropriate certification.
- Metric 6.9: Ensure 90% of projects have FPDs certified at the appropriate level assigned to projects no later than CD-3.
  - The program's recent effort to reduce big projects into smaller ones has helped as it has reduced the level of certification required by directors.
- Metric 6.10: Achieve EM overall prime contract small business goal of five percent.

A monthly review of metrics and strategies is currently under development.

## Acquisition and Project Management Subcommittee Report

EMAB Acquisition and Project Management Subcommittee (APMS) Co-chairs David Swindle and G. Brian Estes presented an interim report to the EMAB, without recommendations, and outlined the Subcommittee's workplan for progress prior to the June 2011 EMAB meeting. A copy of the interim report is available online at <http://www.em.doe.gov/pdfs/emab/APMS%20Report%2024%20Feb%202011%20EMAB%20Meeting,%20FINAL.pdf>.

Mr. Swindle shared background on the APMS, describing its outlook as optimistic but cautious about EM sustaining progress. At the last full public meeting in September 2010, the APMS presented a detailed report with recommendations on contract and project management. On November 1, 2010, Dr. Triay sent a memorandum to EMAB in response to each of the recommendations. The responses were reviewed in detail by the APMS, and EMAB held a meeting by teleconference on November 17, 2010, to go over these additional findings. Ultimately, the full Board approved the APMS report.

Since that meeting, Mr. Swindle participated in the December 2010 contract and project management meeting convened by Deputy Secretary Poneman. It highlighted the importance of contracting and project management to both the Secretary and Deputy Secretary. Since December 2010, the Subcommittee has met with the DOE Directors of the Office of Management and OECM. The Subcommittee has also held discussions with Mr. Frazer Lockhart, who leads a comprehensive plan to get EM off of the GAO High-Risk List.

The APMS highlighted five areas of focus.

The APMS has a very strong interest in improving and implementing changes in EM. In meeting with Deputy Secretary Poneman, Jack Craig of the EM CBC, and key advisors, it is very clear that this focus is for the benefit of the whole Department. It addresses the very culture of EM wherein past problems in acquisition and project management have occurred.

Secondly, there is an incredible, Departmental-level effort to improve acquisition and project management. Because the institution of these improvements takes time, Dr. Triay's consistent focus will be essential, said Mr. Swindle. The APMS recommended that EM needs to measure how well improvements are implemented. Areas of improvement include communication of roles and responsibilities between HQ and the field, empowerment of FPD, identification of true project owners, and change order management.

Mr. Swindle expressed that the APMS is concerned with how EM scores itself compared with others. It may be that the metrics are different versus GAO or others and that EM's need to be realigned. There may be differences in interpreting how well performance is taking hold.

A third emphasis area is to encourage focus on lessons learned and for EM to build a process for this identification in place. The metrics and management of how those lessons learned will be utilized needs to be clarified. The APMS pointed out that the use of external reviews has been helpful at HQ and in the field. However, a process is needed for ensuring that items that come up during reviews are addressed in timely manner.

Prior to the June 2011 EMAB meeting, the APMS will focus on lessons learned and strategies for their implementation. The APMS is also concerned about pressure on program direction funding. There is undoubtedly increased fiscal pressure throughout government. The APMS suggested revisiting the exploration of a revolving fund to provide resources for project management from project funds rather than from program direction funds as is currently the case. The Subcommittee will be looking at that in the coming weeks. The strategy within EM is currently unclear.

A fourth area is a response to Dr. Triay's request that the APMS focus on the contractor models that are used in EM, the DOE Order 413 process, and whether EM should reexamine the management and operations (M&O) model used by the Office of Science and NNSA to better manage risk and project planning. Finally, the APMS will determine if and how EM is implementing the September 2010 recommendations.

Mr. Swindle highlighted excerpts from the GAO High-Risk Report. At the onset, there is considerable alignment between the report and what the Subcommittee presented in September 2010. Mr. Swindle noted for EMAB that the report recognized that EM has made progress overall in acquisition and project management. It stated that there are five criteria that any government project would need to address to get off of the list, and that EM met three of the five.

Two areas that GAO identified that still need attention are the topics of capacity and monitoring. The action plan presented by the APMS addresses those points.

The GAO report also noted that the DOE has not consistently improved contractor performance and management. This recognizes inconsistencies in how EM performance is scored internally and by external organizations. The APMS will strive to clarify any fundamental disconnects to achieve alignment and get off of the High-Risk List.

GAO notes that DOE's corrective action plan calls for addressing management contractor problems as one of its top ten issues. Specifically, GAO noted that the Department lacks an adequate number of project management personnel with appropriate skills to plan, direct, and oversee project execution, and that these challenges are likely to continue as the workforce ages and DOE faces budget constraints.

Mr. Estes pointed to pages 28-30 of the GAO report and the positive comments about EM's progress. After page 129, there is criticism such as the finding that eight of 10 major NNSA and EM projects exceeded cost estimates that added \$14 billion to total cost, and that nine of 10 were behind schedule, adding 45 years to the initial schedule.

Mr. Estes noted that the APMS determined that GAO recognizes that some projects underway do not meet planned costs and time expectations, and that record will always be there and never meet the initial goal upon completion. GAO did indicate that they were looking at a three-year rolling average so that the program would not be penalized forever.

Mr. Estes noted that Mr. Surash's presentation of goal 6.1 suggested that 90 percent of projects would be completed within 10 percent of original estimates. Mr. Surash confirmed that the window for project completion is 2011. The metric is from the root cause cap and measures the number of projects completed in FY 2011. The three-year rolling average is a second piece that will measure FY 2011, 2012 and 2013.



Mr. Estes asked about cost estimating procedures pointing out that a guide has been published that indicates at that these procedures “may be” used as opposed to “shall be” used. He wondered if GAO would be satisfied with this permissive language.

Mr. Surash expressed that GAO will expect that proper cost estimates are performed. The DOE guides are not necessarily mandatory, and different approaches can be used for a cost estimate. Mr. Surash noted that for the type of contracts that EM is using, if they follow DOE Order 413, then the program should be successful.

Mr. Estes responded that EM must address its culture and gain buy-in from contract and project management staff.

Mr. Surash noted that trouble can begin at the contractor level. If there is a change proposed by the contract, then contract and change submittals must be received. DOE must then take the correct action. EFCOG has performed a survey for EM-80, and he and the EM Principal Deputy Assistant Secretary will meet with EFCOG during the week of February 28- March 4, 2011, to address this issue and get all parties to work together.

### **Roundtable Discussion**

Dr. Ferrigno asked Mr. Surash about the use of green and yellow marks on the goals and if this equals reporting like 90 percent and such. Mr. Surash indicated that the current markers are qualitative and based on each office’s assessment. He suggested the need to develop red, yellow, and green bands and to integrate quantitative data. Dr. Ferrigno suggested that the monthly management reporting system could use a color chart based on 95, 90, and 85 percent levels reflective of the OECM measures.

Dr. Ferrigno asked if metric 6.6 is being measured by the dollar volume of lifecycle cost or the number of projects, and within the measurement, who is verifying correctness. Mr. Surash responded that this is a dollar measure, and suggested that Ms. Luczak and Mr. Gaffney from the EM Office of Budget be consulted for more detail.

Dr. Ferrigno asked about the CPR and how it relates to the integrated project team (IPT) regarding policy and oversight of the project. Dr. Ferrigno noted that in the TWS report, the yearly review of lifecycle cost is an IPT function, and wondered how that relates to the CPR and what they are doing.

Mr. Surash noted that the CPR looks at the project that is under contract, but is not aware that the CPR teams are providing focus on lifecycle cost. Ms. Olinger commented that the teams address projects but not the overall mission.

Mr. Klein commented on the necessity for a good contract that reflects the task at hand and desired behavior from the contractor. He noted that another phase of the program is nearing and advised returning to M&O contracts. Mr. Klein recommended looking at the right kind of contracts and change agent to bring these things to an end based on each site.

Mr. Klein also asked Mr. Surash how many projects are being counted and if WTP counts as just one project. Mr. Surash believes that there are 60 capital projects. Ms. Olinger added that WTP counted as one, but really encompasses five.

Mr. Ajello noted that in terms of the JTE, discussion of the kinds of contracting needed is very pertinent. He was surprised by Dr. Triay's comments on how many projects would be done in the next eight to 10 years in the life of a program that started 60 years ago.

Ms. Olinger noted that the major project left is Hanford. The lifecycle cost is \$62 million without the vitrification plant and it is still daunting. However, this is a vision for the rest of the sites, including completion in Idaho by 2015, notwithstanding calcine treatment.

Mr. Thompson commented that there are 60 capital projects and 59 may be projects on which the program is doing well. However, he wondered how GAO will regard the success record if the one remaining bigger project fails.

Mr. Surash noted that GAO will always be able to label the WTP as a failed project because it failed to meet baseline.

Ms. Olinger responded that it was the TPA milestone that drove the date as the program focused on glass in 1997, 2002, and further. Idaho provided a lesson when Dr. Dr. Triay had to sign a Record of Decision (ROD) on calcine because that was a regulatory milestone. Regardless, Dr. Triay conveyed to the regulators that that would not force the program in the CD process. The lesson is that time is needed to mature the technologies and EM should not enter into a baseline just because there is a regulatory milestone. The baseline declaration is a message sent to Congress to request funds. Changes are being made to avoid this type of situation in the future.

Mr. Klein offered that EM can become trapped when it responds to someone else's metrics. He suggested that getting off of the High Risk List should not drive the program's own definition of success, and that EM should avoid debating the 90 percent goal. The WTP may remain on the list for years to come regardless of how much EM improves.

Mr. Thompson pointed out the connection between the quality of information that the contractor is putting into the system and streamlining the system.

Mr. Swindle ended the session noting the importance of putting lessons learned into place and building sustainability going forward.

### **EM Journey to Excellence Goal 7: Achieving Excellence in Management in Leadership**

Mr. Richard Moorer spoke on behalf of Ms. Waisley, DAS for Human Capital and Corporate Services.

The JTE roadmap is the best example of what Mr. Moorer's responsibility entails. The strategic plan serves as a guidepost driving EM's actions, strategies, and budget requirements. It is designed to force cross-fertilization across EM and has spawned actions embodied in the annual agreement with Dr. Triay.

EM believes that the Roadmap helps develop clear and measurable metrics for all seven goals and provides a common framework for the whole organization. The Roadmap will be revisited on at least an annual basis to assess progress and changes happening with the budget landscape and in policy development.

Mr. Moorer presented the annual performance agreement. Buy-in across EM is important and the document has received leadership support. EM is also trying to reach its more than 1,500 federal employees. Recent efforts to reach employees include using a dashboard on the DOE system to demonstrate the metrics and to show progress. Additionally, the agreement is addressed as a weekly item in the DAS meetings and EM FEDCAST emails, and each champion is obligated to provide an update during the year. EM is also organizing its first quarterly reviews around this. A final step is to get managers to talk about goals in a consistent manner across EM.

The group working on this issue will issue a report on March 31, 2011, which can be made available to EMAB's subcommittee.

Defining Goal 7 has been challenging and taken time, said Mr. Moorer. The goal stems from the Assistant Secretary's vision that EM be the federal government employer of choice. Annually, the Partnership for Public Service reports on the best places to work in federal government. In 2010, DOE ranked 19<sup>th</sup> out of 32 large agencies. The Nuclear Regulatory Commission (NRC) occupied the top spot.

EM will use existing tools to achieve Goal 7, such as the Employee Viewpoint Survey (previously known as the Federal Human Capital Survey) administered annually by OPM. EM's response rate is two points below the government-wide average of 52 percent.

Areas where EM ranked highest in the 2008 survey were:

- "My supervisor supports my need to balance work and life issues"
- "I know how my work relates to the agencies goals and priorities"
- "Accountability and getting results"

Lowest scores in 2008 were registered for: "In my work unit, steps are taken to deal with poor performers who cannot or will not improve."

Two areas that decreased in 2010 were:

- "Creativity and innovation are rewarded"
- "Differences in performance are recognized in a meaningful way"

The highest scores in the 360 degree assessments for managers are for integrity, honesty, ethics, accountability, and never misleading or taking advantage of individuals who are vulnerable. The lowest scores were in performance management, specifically rewarding good performance and dealing with poor performance, creativity and innovation, leaders generating inspiration and commitment among the employees, and fostering new ideas and ways to get work done.

Benchmarking against other agencies is underway. Specifically, EM is looking at the NRC and NASA, which received OMB's designation as "high-performing organizations." EM is also looking at high-scoring field sites like Carlsbad and Richland. EM will next conduct a gap analysis and develop a path forward.

### **Roundtable Discussion**

Mr. Thompson commented that results indicate that the Department does not seem to recognize creativity and spontaneity, and described DOE as being risk-averse in all that it does. He wondered how the Department can achieve balance between both.

Mr. Moorer responded that attempting to change culture takes time. He believes examples must be offered within EM as employees watch their leadership. If someone takes a risk and is penalized, they are less likely to do that again and their peers are unlikely to take risks as well. Everyone in the organization who manages people needs to be aware of that. In that regard, Dr. Triay has made a commitment to training, coaching, and mentoring her senior leaders.

Mr. Ajello reminded EMAB that the Board previously took up some human capital themes such as transition, morale, mentoring, redeveloping an intern program, and celebrating successes. He noted DOE should be one of the most exciting places to work in government; EM needs to be sold better.

Mr. Swindle commented that holding people accountable when mistakes are made is also an effective component of human capital management and is not addressed in the current plans.

Mr. Moorer agreed with the need to hold people accountable and reward success, and that that needs to be included if it is not already in the plan. Mr. Moorer also reflected on Mr. Swindle's earlier comment about getting project managers to push stuff out and Dr. Triay has been developing a delegation memorandum to that affect. The intent is to empower field and project managers with more authority and decision-making capabilities. Mr. Swindle added that within the last 30 days, there has been an attempt by the EM-1 to establish single points of accountability at HQ and put in project owners who follow the SC models and others that are effective.

Ms. Salisbury expressed concern about accountability and survey results that demonstrate employee concern that those who are poor performers are not being held accountable.

Mr. Moorer shared that the program is working with OPM to interpret the finer points of the survey and develop strategies to address weak points.

Mr. Dabbar noted that there are a number of human capital tools available. He highlighted the challenge involved in creating new cultures when mergers occur. It does not work when done only at the DAS level, but requires getting the whole organization to participate in an open dialogue. Mr. Dabbar's prior experience included participation in workshops with facilitators that allowed working groups to talk about the type of organization they wanted to become. This process took two years of meetings and process got down to micro-inequities and the little things that management should and should not do.

Dr. Ferrigno reminded the group of the issues and challenges that DOE and agencies have with financial constraints. There is a current three-year wage freeze for federal employees. Workforce transition is another issue. This presents an opportunity for leadership to show prowess in keeping morale high and keeping the mission moving. Dr. Ferrigno asked Mr. Moorer if there is anything he might add concerning those challenges and leadership issues.

Mr. Moorer responded that the program is trying to address that specific issue, having to struggle with layoffs in the field with respect to contractors, and that EM is just beginning to deal with that changing landscape. Mr. Moorer invited EMAB to offer suggestions.

Mr. Ajello offered that EM should never waste a good crisis. This is an opportunity to rally the organization, for management to high-grade the talent, for people to migrate, for leadership to

rotate the talent, and to observe where people emerge. During great duress, an organization can determine who “wants to be on the bus.”

Mr. Dabber agreed and described a prior experience in ranking people. The organization forced leadership to put things on a curve of 10, 80, and 10, and those on the 10 were forced out. This reflects the economic realities, and people can respect this process if it is done this openly and transparently.

Mr. Ajello reflected that this opportunity helps focus the mind when thinking about the possibility of not surviving. That mindset can be helpful during a tough cycle.

Dr. Coffman characterized EM as feeling beaten up and overworked. The things that have been talked about are not necessarily those that will make the program a great place to work. For example, increasing accountability may not be as meaningful as giving people more authority and putting them in charge of a project. Three-hundred sixty degree reviews and accountability are good when the organization is pumped up, but not day-to-day. The Assistant Secretary and her direct reports can engage professional help that instructs them on how to behave and imbue EM with a can-do attitude. Dr. Coffman stated that there are then second tier things to do such as removing bureaucratic and procedural fluff to focus on innovation, access, and rewarding good ideas.

Mr. Klein reflected on Dr. Triay’s earlier comments on institutionalizing the EM way and noted that a particularly strong leader can end up eclipsing other leadership. Mr. Klein recommended that consideration of what would happen to EM if Dr. Triay were promoted. This framework can prove out if the organization would continue on and be able to respond to crises effectively.

Ms. Lessie Price affirmed Dr. Coffman’s comment, highlighting the importance of giving people responsibilities and important tasks, and asking them for their ideas and input. Ms. Price also confirmed the necessity to demonstrate caring for employees.

### **Human Capital Subcommittee Status Update**

EMAB Human Capital Subcommittee (HCS) Co-Chair Lessie Price provided an update on the Subcommittee’s work. Other subcommittee members include Mr. A. James Barnes (Co-Chair), Mr. Estes, Mr. Klein, and Mr. Willie Preacher.

Ms. Price noted that EMAB has provided a lot of positive input to EM over the years. The JTE combined with the Human Capital Strategy and performance surveys that will impact safety and lead to continuous improvement can yield positive results.

Ms. Price is concerned about several items within the employee survey. Employees must be assured that the survey results are taken seriously and that the program is committed to going through this process. Morale and performance can be improved through a demonstration that EM is going to take action. Ms. Price noted that leadership needs to demonstrate that it cares about the employees’ work and convince employees that they are not taken for granted.

Ms. Price highlighted individual meeting attendees as great examples of EM’s workforce. These individuals are all highly credentialed, demonstrate caring, and are able to create good public

impressions of EM. Especially encouraging is EM's ability to nurture and strengthen the development of employees.

There are many issues still at hand. Changes should not be implemented simply for change's sake. Ultimately, the employees should recognize that leadership cares about their issues.

#### **Roundtable Discussion**

None

#### **Public Comment Period**

None

#### **Board Business**

Approval of the minutes from the public meeting on September 15, 2010, were nominated for motion by Dr. Ferrigno, seconded by Mr. Swindle, and approved by the Board with none opposed.

Approval of the minutes from the public teleconference on November 17, 2010, were nominated for motion by Mr. Estes, seconded by Ms. Price, and approved by the Board with none opposed.

Mr. Ajello reported that EMAB's next public meeting is scheduled for June 23, 2011, in Washington, DC. EMAB members experiencing a conflict with this date should inform Ms. Ellis.

Mr. Ajello noted that the Management Excellence Subcommittee activities will be better planned and coalesced due to the integration of the JES and HCS purviews. He will work with Ms. Ellis to organize the new subcommittee. Distribution of members on EMAB's various subcommittees should be examined as part of determining how best to be prepare for the June 2011 EMAB meeting.

#### **New Business**

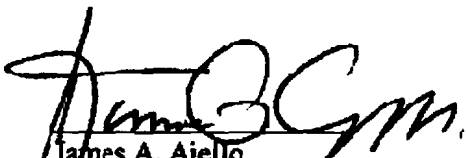
Dr. Ferrigno suggested that the EMAB members could relay their experiences with organizations facing challenging times to EM leadership to help guide the team. Mr. Ajello agreed that the members may have some case studies to contribute to the topics within the JTE and suggested that this task be appended to EMAB's work on Roadmap Goal 7.

Mr. Swindle requested an update on the budget outlook for EM at the June 2011 meeting in light of the Continuing Resolution process. If there are impacts, the EMAB would benefit from understanding the implications. Dr. Ferrigno added that a focus for 2011 is compliance and is interested in knowing of budget details that might be related to compliance. Mr. Ajello confirmed that the EMAB would like to know of a "Plan B" if the budget forecasted is severely impacted.

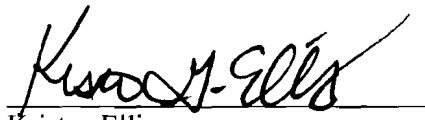
### Closing Remarks and Adjournment

Mr. Ajello adjourned the meeting around 4:00 p.m. PST.

I hereby certify that, to the best of my knowledge, the foregoing minutes are accurate and complete.



James A. Ajello  
Chairman  
Environmental Management Advisory Board



Kristen Ellis  
Designated Federal Officer  
Environmental Management Advisory Board

These minutes will be formally considered by the Board at its next meeting, and any corrections or notations will be incorporated into the minutes of that meeting.

## APPENDIX A

## ENVIRONMENTAL MANAGEMENT ADVISORY BOARD

Green Valley Ranch • La Sirena II

2300 Paseo Verde Parkway • Henderson, Nevada 89052

February 24, 2011	
8:30 a.m.	<b>Welcome and Overview</b> <ul style="list-style-type: none"> <li>James Ajello, <i>EMAB Chair</i></li> </ul>
8:45 a.m.	<b>EM Update</b> <ul style="list-style-type: none"> <li>Inés Triay, <i>Assistant Secretary for Environmental Management</i></li> </ul> <u>Roundtable Discussion</u> <ul style="list-style-type: none"> <li>Discussion Leader: James Ajello, <i>EMAB Chair</i></li> </ul>
9:30 a.m.	<b>Journey to Excellence Subcommittee Status Update</b> <ul style="list-style-type: none"> <li>Discussion Leaders: James Ajello and Jennifer Salisbury, <i>Journey to Excellence Subcommittee Co-Chairs</i></li> </ul>
10:00 a.m.	<b>Break</b>
10:15 a.m.	<b>EM Journey to Excellence Goal #1 and Goal #2: Tank Waste and Lifecycle Costs</b> <ul style="list-style-type: none"> <li>Shirley Olinger, <i>Associate Principal Deputy for Corporate Operations</i></li> </ul>
10:45 a.m.	<b>Tank Waste Subcommittee Report</b> <ul style="list-style-type: none"> <li>Dennis Ferrigno and Lawrence Papay, <i>Tank Waste Subcommittee Co-Chairs</i></li> </ul>
12:15 p.m.	<b>Public Comment Period</b>
12:30 p.m.	<b>Lunch</b>
1:30 p.m.	<b>EM Journey to Excellence Goal #6: Improving Contract and Project Management</b> <ul style="list-style-type: none"> <li>Jack Surash, <i>Deputy Assistant Secretary for Acquisition and Contract Management</i></li> </ul>
2:00 p.m.	<b>Acquisition and Project Management Subcommittee Report</b> <ul style="list-style-type: none"> <li>G. Brian Estes and David Swindle, <i>Acquisition and Project Management Subcommittee Co-Chairs</i></li> </ul>
3:00 p.m.	<b>Break</b>


**EM Environmental Management**

safety ♦ performance ♦ cleanup ♦ closure

[www.em.doe.gov](http://www.em.doe.gov)



<b>EM Journey to Excellence Goal #7: Achieving Excellence in Management and Leadership</b>	
<b>3:15 p.m.</b>	<p><b>EM Journey to Excellence Goal #7: Achieving Excellence in Management and Leadership</b></p> <ul style="list-style-type: none"> <li>• Sandra Waisley, <i>Deputy Assistant Secretary for Human Capital and Corporate Services</i></li> </ul>
<b>3:45 p.m.</b>	<p><b>Human Capital Subcommittee Status Update</b></p> <ul style="list-style-type: none"> <li>• A. James Barnes and Lessie Price, <i>Human Capital Subcommittee Co-Chairs</i></li> </ul>
<b>4:00 p.m.</b>	<b>Public Comment Period</b>
<b>4:15 p.m.</b>	<p><b>Board Business</b></p> <ul style="list-style-type: none"> <li>• Vote on Proposed Reports and/or Recommendations</li> <li>• Discussion of Subcommittee Paths Forward</li> <li>• Approval of the September 15, 2010 Public Meeting Minutes</li> <li>• Approval of the November 17, 2010 Public Teleconference Minutes</li> <li>• New Business</li> </ul>
<b>5:00 p.m.</b>	<b>Adjournment</b>



**EM Environmental Management**

safety ✦ performance ✦ cleanup ✦ closure

[www.em.doe.gov](http://www.em.doe.gov)