

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

PUBLIC MEETING MINUTES

**U.S. Department of Energy
1000 Independence Avenue, SW – Forrestal Building Room 8E-089
Washington DC 20585**

June 23, 2011

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**ENVIRONMENTAL MANAGEMENT ADVISORY BOARD
SUMMARY OF MEETING**

The Environmental Management Advisory Board was convened at 8:35 a.m. EST on Thursday, June 23, 2011, at the US. Department of Energy Forrestal Building in Washington, D.C. Chairman James Ajello introduced the Board members for the meeting.

Board members present:

Mr. James Ajello, Hawaiian Electric Industries, Inc.
Mr. A. James Barnes, Indiana University
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
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

Members joining by conference call:

Dr. Rodney Ewing, University of Michigan

Subcommittee members present:

Dr. Kevin Brown, Vanderbilt University
Dr. David Kosson, Vanderbilt University
Dr. Rodney Strand, Consultant

EMAB Designated Federal Officer:

Ms. Kristen Ellis, DOE Office of Environmental Management

Others present for all or part of the meeting:

Mr. Scott Bartel, DOE Office of Environmental Management
Mr. Brad Bowan, Energy Solutions
Mr. C. Paul Deltete, CAF Services, LLC
Ms. Allison Doman, Energy Communities Alliance
Mr. Tom Fletcher, DOE Office of River Protection
Mr. Mark Frei, Frei Solutions
Ms. Joann Luczak, DOE Office of Environmental Management
Mr. Anthony Kluk, DOE Office of Environmental Management
Mr. Brian Kong, DOE
Ms. Elaine Merchant, DOE Office of Environmental Management
Mr. Barry Naft, Consultant
Ms. Melissa Nielson, DOE Office of Environmental Management

Mr. Mike Nartker, Weapons Complex Manager
Ms. Shirley Olinger, DOE Office of Environmental Management
Mr. Jody Redeker, Fluor
Mr. Donovan Robinson, Office of Management and Budget
Mr. Paul Rutland, URS
Mr. Derek Sands, Platts
Mr. Gary Smith, DOE Office of Environmental Management
Mr. Don Sticinski, Fluor
Ms. Patricia Suggs, (DOE) Savannah River Site
Mr. Leo Thompson, URS
Mr. Jeff Trent, DOE Office of Environmental Management
Dr. Inés Triay, DOE Office of Environmental Management
Ms. Angela Watmore, DOE Office of Environmental Management
Mr. Matt Zenkovich, DOE Office of Environmental Management

LIST OF ACRONYMS

APMS – Acquisition and Project Management Subcommittee	NNSA – National Nuclear Security Administration
ARRA / “Recovery Act” – American Recovery and Reinvestment Act	NNSS - (DOE) Nevada National Security Site
BOF – Balance of Facilities	NRC – Nuclear Regulatory Commission
CCIM – Cold-Crucible Induction Melting	Oak Ridge – (DOE) Oak Ridge Site
CPR – Construction Project Review	OMB – Office of Management and Budget
CRESP – Consortium for Risk Evaluation with Stakeholder Participation	ORNL – Oak Ridge National Laboratory
DAS – Deputy Assistant Secretary	Paducah – (DOE) Paducah Site
DFO – Designated Federal Officer	Portsmouth – (DOE) Portsmouth Site
DOE – Department of Energy	RMF – Rotary Microfilter
DWPF – Defense Waste Processing Facility	S-1 – (DOE) Secretary
EIS – Environmental Impact Statement	S-2 – (DOE) Deputy Secretary
EM – Office of Environmental Management	S-3 – (DOE) Under Secretary
EM-TEG – Environmental Management Technical Experts Group	Savannah River – (DOE) Savannah River Site
EPA – Environmental Protection Agency	SC – (DOE) Office of Basic Science
EVS – Employee Viewpoint Survey	SCIX – Small Column Ion Exchange
FACA – Federal Advisory Committee Act	SRS – (DOE) Savannah River Site
FY – Fiscal Year	TRL – Technology Readiness Level
GAO – Government Accountability Office	SWPF – Salt Waste Processing Facility
GTCC LLW – Greater-Than-Class-C Low-Level Waste	TRU – Transuranic Waste
Hanford – (DOE) Hanford Site	TPA – Tri-Party Agreement
HEWD – House Energy and Water Development	WIPP – Waste Isolation Pilot Plant
HLW – High-Level Waste	WTP – Waste Treatment Plant
Idaho – (DOE) Idaho Site	
LANL – Los Alamos National Laboratory	
LAW – Low-Activity Waste	
LCC – Life Cycle Cost	

MEETING MINUTES

OPENING REMARKS

The Environmental Management Advisory Board was convened at 8:35 a.m. EST on Thursday, June 23, 2011, at the U.S. Department of Energy (DOE) by Chairman James Ajello. He introduced the EMAB members and noted that the meeting was an open meeting conducted in accordance with the requirements of the Federal Advisory Committee Act. He reminded attendees to visit the website <http://www.em.doe.gov/emab> for more information about the EMAB.

EM PROGRAM UPDATE

Dr. Inés Triay, Assistant Secretary for the DOE Office of Environmental Management (EM), provided an update on the EM program. A copy of her presentation is available at (<http://www.em.doe.gov/stakepages/emabproducts.aspx#june11>). Dr. Triay welcomed the EMAB members and thanked all for completing tasks and deadlines, particularly Dr. Ferrigno and Dr. Papay and the EMAB Tank Waste Subcommittee (TWS).

She began her presentation with a brief overview of the DOE Strategic Plan, which has been published and is available online (http://energy.gov/media/DOE_StrategicPlan.pdf). Objectives in the plan include EM's complete site remediation, the handling of tank waste, and the use of modeling tools. EMAB was asked to read the plan to understand EM's obligations, identify opportunities for EM to align with the plan, and ensure that EM is an asset to the DOE.

EM's Journey to Excellence Roadmap was informed by the DOE Strategic Plan. The goals outlined in EM's Roadmap include address both programmatic issues (goals 1-4) and business processes (goals 5-7). Dr. Triay feels that these latter goals will help EM effectively deliver on elected leaders' proposed visions for EM and help avoid confusion for staff and stakeholders. She asked the EMAB to help with defining the implementation of these goals.

Contract management and sustainable business processes are being developed to ensure that staff can manage contracts amidst greater, programmatic and political changes, such as changing administrations. EM is conducting complex-wide training sessions with the help of Mr. Jack Surash, Deputy Assistant Secretary (DAS) for Acquisition & Contract Management. Dr. Triay sought EMAB's advice on making contract management changes sustainable in order for EM to optimize business operations.

EM's Presidential budget request for Fiscal Year (FY) 2011 was reduced by Congress from \$6 B to \$5.633 B. Funding originates from three specific allocations: defense clean-up, uranium decontamination and decommissioning, and non-defense clean-up activities. In FY 2012, EM's Presidential request of \$6.1 B was reduced by the House Energy and Water Development (HEWD) Subcommittee to \$5.6 B. This will be the new baseline for EM and reflects 2008 funding levels.

A funding reduction means that EM must devise new practices governing expenditures and contractor relations, and find ways to assist contractors to help them do more for less and in a shorter time frame. More effective partnering with contractors and providing them with DOE expertise to be effective is one approach. Prime Contractor corporations will be asked to identify opportunities to reduce efforts that do not support the actual mission.

EM is examining program development and support to maximize expenditures with a focus on training, travel, and intern programs. This is balanced with contractor support at a level that maximizes the growth of the federal staff and the training of staff – things that are important to the Secretary. EM will also fund projects at an 80 percent rate of probability for success and commit to fewer projects. All projects must have a clear scope and schedule.

Ms. Shirley Olinger, Associate Principal Deputy for Corporate Operations, is leading a top-to-bottom review of program direction and accounting at EM Headquarters (HQ) and the field offices. Project sponsors have also been designated for all line-item construction projects. This decision was based on the success of assigning a sponsor for the Waste Treatment Plant (WTP) construction. The concept has been presented to the Secretary and the results of his review are forthcoming. In this respect, the Secretary decided to aid EM by reviewing all high-risk projects and recommendations, which should improve project implementation.

These changes will not affect the Journey to Excellence goals. A recent session with the DAS and field managers affirmed a commitment to establish and maintain the capacity to stay on schedule and cost. This remains true for the three construction projects that are of the highest-risk for EM. In particular, Dr. Triay is pleased that construction of the Sodium Bearing Waste Facility at Idaho National Laboratory (INL) will be complete this year and will be commissioned in 2012.

Improving contract and project management is a critical procedural goal. EM has a \$22 B project portfolio and 55 total projects compared with other offices that have a greater annual budget but fewer projects. This puts a tremendous burden on the EM staff and requires operations to be conducted with great rigor and discipline in line with DOE Order 413. In terms of equating success with ensuring a percent of dollar value that falls in acceptable status and the percent of projects that fall into an acceptable status, EM is at 97 and 89 percent, respectively. The goal is to equal the 100 percent standards achieved by other offices such as the DOE Office of Science (SC). Consequently, Dr. David Lehman of SC is leading a review of EM to determine if there are aspects of SC project management that can help EM.

Focus on human capital is another procedural goal vital to EM's success and one that Dr. Triay takes very seriously. From an employee standpoint, this is important due to the controversial nature of EM challenges, and the need for transparency. Goals must be communicated clearly with honesty that is embraced by EM's workforce.

Dr. Triay reminded EMAB of the magnitude of the completion of tasks such as 90 percent of transuranic waste (TRU) disposal by 2015. She is pleased that the Idaho site waste clean-up is near completion but emphasized the need to continue clean-up of highly radioactive waste and clean-up at the Savannah River Site (SRS) and the Hanford site.

EM's enforceable milestones include 141 in FY 2010 and 160 in FY 2011. Faced with a potentially reduced budget, EM must establish priorities based on risk and make decisions with regulators to determine which risks to tackle first. A result has been collaboration at Oak Ridge National Laboratory (ORNL) by the Consortium for Risk Evaluation with Stakeholder Participation (CRESP) to work with regulators and stakeholders to prioritize work under these constraints.

Ultimately, EM must avoid simply doing less due to budget constraints. EM should look at what was done right through the American Recovery and Reinvestment Act (ARRA) and how to incorporate those lessons into the base program. EM can continue making significant progress in the next 10 years through staff ingenuity, operational creativity and innovation, and effective engagement with regulators and citizens. EMAB was asked to provide recommendations to help EM maintain its baselines and progress on complex projects such as the Hanford site's River Corridor work and plutonium clean-up.

ROUNDTABLE DISCUSSION OF EM UPDATE

Mr. John Owsley noted the importance of clear and frequent communication with regulators to achieve compliance. He supports EM's commitment to this aim and cited work in Tennessee as an example of this desire to work together.

Mr. David Swindle asked Dr. Triay to elaborate on the Secretary's review of EM HQ and EM initiatives. Dr. Triay confirmed that the Secretary is committed to making revolutionary changes to ensure the routine delivery of projects, at cost and on time. Her office will provide the EMAB with the official charge memo from the Secretary. Strategies include how best to use the Army Corp of Engineers and learning how other DOE programs achieve high results on comparably-sized projects. The Secretary has assembled a team to review EM HQ and projects at SRS, Idaho, and Hanford, and is examining ways to improve the core elements of EM. Early observations include kudos for the amount of oversight given by EM and other offices in DOE HQ to field operations, and the fact that contractors in charge of construction projects and DOE staff demonstrate good teamwork and approaches to completing construction. Recommendations from the review group are forthcoming. One focus will likely be insights gained from other parts of DOE (including SC) and models for coordination between HQ and field offices.

Mr. Paul Dabbar shared that the Daiichi Nuclear Plant disaster in Japan has lead to discussions with the Nuclear Regulatory Commission (NRC) regarding commercial site-by-site systems and the need for safety-related protocol in other countries. DOE might consider the lessons learned from the event in Japan. It has provided valuable lessons, said Dr. Triay, and caused a thorough analysis of EM's posture. The Office of Health, Safety and Security (HSS) sent out direction from the Secretary requesting an evaluation of emergency management processes beyond a design basis. A hearing is being held by HSS and the Defense Nuclear Facility Safety Board (DNFSB) to look at information from DOE sites. HSS also sponsored a workshop for nuclear safety professionals to discuss lessons learned and pointed out the need for redundant systems for disaster management. Ms. Olinger pointed out that the DOE has been directly helping Japan manage its 17 M gallons of highly-radioactive liquid but has also gained insights on technologies

being deployed real-time in Japan. The crisis is a test-bed for technologies that DOE has been investigating.

Mr. Keith Klein asked Dr. Triay how EM has managed to remain confident in the face of budget negotiations and controversial projects. Dr. Triay responded that she is never satisfied with her performance and how others do business. Areas in need of improvement include working with the DNFSB and dealing with nuclear safety. Congress has also discussed the need for a clear path forward for H-Canyon but also compliments EM on its use of ARRA funds and footprint reduction efforts. EM's efforts are being recognized but there are still needed improvements.

TANK WASTE SUBCOMMITTEE REPORT

Dr. Dennis Ferrigno and Dr. Larry Papay, Co-Chairs of the EMAB Tank Waste Subcommittee (TWS), presented a draft report to the EMAB offering 43 recommendations. Dr. Papay reported that it was generated from meetings at SRS and Hanford, discussions with contractors, federal staff, and regulators, and the review of more than 1,000 documents provided by EM sites. The TWS received deep technical support from Hanford and SRS. Among the TWS' charges, Charge Eight remains incomplete, pending additional funding support to complete it within the next two months (subsequently deferred to FY 2012). The intent would be to discuss the findings of that charge via public teleconference in August.

Dr. Ferrigno reported an overall need for technology development and improvements. Over time, the sites will generate opportunities for the integration of technologies to reduce costs and increase the delivery rate.

Dr. Ferrigno discussed the Hanford site and need in three major scenarios: Vision 2020, the supplemental treatment project, and the Enhanced Tank Waste Strategy. To comply with EM's Vision 2020, it is important to get the Waste Treatment Plant (WTP) operating as quickly as possible, even while pre-treatment (PT) and high-level waste (HLW) are being commissioned. In dealing with Hanford's tank farms and HLW treatment, re-piping and some technical challenges should be addressed. There are concerns with Cesium 137 and Iodine that have to be filtered, as well as the need for some PT. Accelerating this requires modified PT targeting tank feed. The supplemental treatment project scenario proposes additional low-activity waste (LAW) and mobilization through the use of current technologies or alternate technologies such as fluid-bed steam reforming (FBSR). The supplemental treatment could use additional PT options. The Enhanced Tank Waste Strategy at Hanford proposes that shortening the timeline could amount to multiple billions in life cycle savings. The complication with all of these scenarios is tying schedules to regulations and other decision factors that must be balanced and coordinated.

Key assumptions for Hanford include starting up the tank farm PT by 2016 and running it for approximately 15 months. If EM stovepipes the decision process for Vision 2020 it may only take 15 months, assuming PT meets its contractual performance dates and has the capacity necessary for current and future LAW. Additionally, if LAW at the site can be de-bottlenecked and operators can begin, then positive things could be generated by getting Vision 2020 started early.

Risk reduction is the driver for Vision 2020. The plant startup is significant considering that DOE may not have the readiness for required technologies and systems; getting sequential commissioning and getting people to understand systems is very important. Justifying Vision on life cycle cost savings is hard to do, however when considering risk reduction, justifications becomes clear that Vision 2020 in a modest investment is a wise direction to proceed.

A key driver for the supplemental treatment project is the regulatory assumption of gaining something better than glass or good-as-glass. Dr. Ferrigno indicated that there is potential for significant improvements in the long-term vision for the Enhanced Tank Waste Strategy at Hanford.

A major issue for Vision 2020 is the impact of WTP PT. The potential for work and construction stoppages occur by suddenly injecting nuclear conduct protocol into the existing construction environment. FBSR is an option for Hanford's supplemental treatment project and is suitable for this type of waste and its size, but will be a first of its kind. The Idaho site can provide lessons learned, but these need to be integrated into early designs. Acceptance is a key factor here, as is acceptance of non-vitrification for the Enhanced Tank Waste Strategy.

In-tank small column ion exchange (SCIX) and FBSR of Tank 48 are the approaches employed at SRS. In-tank SCIX is already running with the Salt Waste Processing Facility (SWPF) but experiencing some delays. Tank 48 is also unique as it contains organic liquid laced into the HLW. The TWS reviewed System Plan 16 and treatment can be accelerated as a work-around to SWPF. This, and alignment with the salt waste processing schedule, are major issues for SRS. Regarding FBSR, the original charge to the TWS did not include Tank 48, but the TWS concluded that this needed some focus. There are some capital dollars associated with this if EM chooses FBSR. Dr. Ferrigno proposed that an alternative to FBSR with a higher rate of return is limiting it to one tank and may only be deployed for two years. FBSR produces about 50 containers versus 200 containers with vitrification. This can become a difference of \$200 M.

One consideration for Tank 48 is to start bleeding that tank now to be compliant and to start feeding. If that is not possible, then the Defense Waste Processing Facility (DWPF) could be used and melters could be operated later in the schedule. Operations would have to be changed and even though the baseline says FBSR, EM may realize some other oxidation technology or other approach. This approach needs analysis through a decision matrix and with proper oversight and review.

Construction in the midst of nuclear conduct of operations could bring about the integration of nuclear protocol is an issue at SRS. The site would be more congested, and construction plans include inserting SCIX and rotary microfilter (RMF) and resin grinders as in-tank technologies during operations is a concern. This adds complexity and may require additional review, particularly as it pertains to RMF use.

Dr. Ferrigno reviewed the schedules for Hanford and SRS, noting these dates are moving targets dependent on improvements in technologies and best practices. From an overarching

perspective, EM would maximize its efficiency by funding projects as multi-year investments, not on year to year authorizations.

In response to the TWS's first charge on modeling life-cycle cost (LCC) analysis, consistency and standardization is essential. Overall, the TWS believes EM needs to standardized Life Cycle Cost approach and modeling. This would permit quickly identifying lessons learned and the deliverables of individual projects. It can also enable LCC analysis, operations, and maintenance to be quickly addressed and reviewed.

EM should provide preliminary design funding requests to address risk reductions and establish a potential for savings. The TWS believes that EM should proceed with Vision 2020 and allow a single LAW melter to operate.

EM should also be vigilant in applying resources to additional project development for those projects such as SWPF and WTP that are vital to operations. The Department needs to stay the course on commissioning those plants.

Waste disposition costs should be included in LCC alternatives analysis. When a CD-1 evaluation is conducted, issues related to capital, operating, decommissioning, waste disposition, disposal, risk, and uncertainty should be included. The TWS believes that these may not be necessarily included in EM's budget reporting to Congress for the specific project in that it would be accounted for in another budget authorization. EM needs to look at all costs to make a proper decision on total costs and the impact of operations.

In LCC, there may be some areas where EM needs regulatory relief to allow for technology to develop and make more informed technology-level decisions. There are levels that EM needs to get to in moving from CD-1 to CD-2 and these could pay big dividends.

Within Charge Two and the assessment of candidate LAW forms, there may be dividends in supplemental treatments. This was also reviewed by the EM Technical Experts Group (EM-TEG). When looking at supplemental treatment, the TWS believes there is an 18-month time period in which to do design and performance validation for supplemental treatment decision and selecting technologies before considering regulations and involving regulators as it relates to new Waste Form acceptance

Dr. Kevin Brown commented that he examined the Tri-Party Agreement (TPA) portion of the Consent Order to develop a benchmark for scheduling. Two critical decisions are influential: the October 2014 decision to do something other than glass and the submission of a technical report, and then making a decision by 2015 if something other than vitrification is to be included. Dr. Brown concludes that this represents an intersection of schedules from TPA milestones and that the milestones do not have to be changed. For enhanced tank-waste treatment, EM has to work with these dates based on the decisions to be made and the necessary permits. The schedule presented by the TWS shows overlap and the need for urgency. When applied to Hanford LAW, this is a critical path if the site uses something other than vitrification. This also feeds into the first recommendation. More aggressive partnering with regulators may be needed for risk-related decisions. Dr. Brown urged EM to look at the constituents that drive the risk.

Technology development improvements are being made in handling cesium and FBSR. Eventually, there will be a point where EM has to decide when to stop technology testing and determine what to use based on a defensible technology readiness level (TRL). The TWS proposed that EM take this risk now with regulators or delay the milestones and make a proper decision after further technology development.

The TWS recommended that EM target LAW feed and use specific technologies based on waste characterization to identify impacts to the planning process and explore other waste formats.

Charge Three concerned at-tank or in-tank candidate technologies for augmenting planned waste PT capabilities. Cross-flow filtration is one approach when looking at cesium reduction. DOE has done good work in this area. One recommendation is that SRS document the SCIX downselect process for at-tank or in-tank to select in-tank treatment over other options. The TWS did not find a financial analysis to inform choosing one CD process over another.

Findings do indicate the need to be diligent in the use of resin to avoid CST agglomeration. An investigation of possible pathways in the demineralization itself leads to concerns about channeling and liquids finding a pathway. The resin provides a benefit but there are inefficiencies. Finally, SRS has proven they can mix with 1.3 M gallon tanks and they defy other operations that need smaller tanks, but smaller tanks for mixing would be useful.

Recommendations for Hanford include integrating simpler options such as using disposable resin cartridges to meet Vision 2020. This assumes that PT is on schedule and performing, and that Vision 2020 is only needed for a 20-month period. This comes down to a cost versus benefits decision. Cross-flow filtration could be another approach for Vision 2020. The TWS recommended experimental testing at Hanford to gauge speed and efficiency along with additional RMF testing.

The TWS was asked to evaluate various melter technologies in Charge Four. Joule-heated technology is preferred, but cold-crucible induction melting (CCIM) is another option with merit.

In Charge Five, the TWS evaluated the reliability of waste delivery plans. The Subcommittee believes that DOE urgently needs to build consensus with regulators for Vision 2020. An additional recommendation is that DOE evaluate the single-point failure impact at Hanford if the evaporator is not working. Thin-film evaporation will meet certain criteria based on the TWS's evaluation of 242A. The TWS concluded that there is much less time between each campaign when doing 12-14 retrievals per year. The TWS also recommended urgent finalization of the waste acceptance criteria at Hanford.

The Subcommittee moved to Charge Seven, noting that the clarity and business case for Vision 2020 and early start-up of one LAW melter needs a little more work. The basic issue is coherently laying out the benefits in risk reduction in the near- and long-terms and translating how that plan results in financial risk reduction. The TWS realizes that EM has not yet submitted CD-1, and hence based its conclusions on available information.

The TWS recognized that achieving production and getting commissioning going faster is a good strategy. In the event that PT is not there, however, there is no LCC savings at this time for doing that and regulatory drivers may not be available. The TWS believes the risk reduction and contingency planning is a good idea. This can all be clarified as content is assembled for the CD-1 process submission in September.

Overall, EM has managed Vision 2020 well and leadership should reap dividends with plant commissioning. The TWS recommended that the proposal for Vision 2020 needs to be better articulated and quantified to form a more compelling business case. Probabilistic simulations and modeling need to be included, but for the business case, the assumptions and realities applied to operations needs clarity to inform understanding of possible risk reductions and bolster confidence levels. Finally, the biggest benefit of Vision 2020 can be realized by supporting the technical pathway of sequential commissioning of WTP, the balance of facilities, LAW, and the Laboratory, followed by the commissioning of PT and HLW. This allows EM to start with training, certification of the organization and personnel, and then the startup can begin.

From a technical side, Vision 2020 should focus on the elements needed to get LAW going. If the business case says that Vision 2020 can benefit from supplemental treatment, then that is good. Dr. David Kosson noted that if this is laid out as a stovepipe and if viewed broadly then there are benefits that need to be clarified. EM will have to be clear in following the objectives of Vision 2020. It is the consensus of the TWS that looking at the Vision 2020 mission and then supplemental treatment, there are two separate sets of benefits. The catalysts that will get the operation moving quickest involve different costs and timelines. This is worth exploring and should not be taken by EM as not doing other things. The TWS sees this as an action item and in the purview of 2050, believes Charge Seven should be advanced due to its time criticality.

Vision 2020 for Hanford has high schedule and regulatory risk. The project is crisis-oriented and requires regulatory personnel to be engaged and partnered with ecology experts and officials, akin to American Reinvestment and Recovery Act (ARRA) reporting. The vulnerabilities are explained more fully in the report appendices, and the TWS conveyed that vulnerabilities could impact the overall mission, costs, safety, compliance with regulatory agreements.

A specific vulnerability at Hanford is the DOE LCC system-wide process. Use of the EM Consolidated Business Center (CBC) and a system-wide process for costs and schedule was recommended. The TWS urged EM to get the project started and get over those hurdles quickly to generate benefits for the workforce and the EM.

The TWS concluded by urging that overall the projects do not seem overly complicated, but that proper controls should be put into place soon due to the short timeframe allowed for completion.

Dr. Triay thanked Drs. Ferrigno and Papay for their efforts. She noted that the EM is still struggling with a one-system approach and that that was not the intent of the Department. EM must ultimately optimize processes for the benefit of the entire mission of tank waste cleanup. She reminded the EMAB that EM is implementing some activities already, citing work at SRS using existing infrastructure.

ENHANCED TANK WASTE STRATEGY UPDATE

Ms. Olinger provided the EMAB with an update on Journey to Excellence Goal Two: Reduce the life-cycle costs and accelerate the cleanup of the Cold War environmental legacy.

EM's remaining "to-go" lifecycle costs range from \$185 B to \$218 B. Forty-three percent of these costs are tank waste and this is a critical path for LCC and the EM mission. EM is seeking to reduce LCC costs by \$43 B. EM is also focused on reducing LCC associated with modeling and is working with regulators and stakeholders to develop a better portfolio for risk reduction and cleanup. Among LCC reduction strategies, EM is looking at leveraging assets at Oak Ridge, Paducah, and Portsmouth, including working with DOE policymakers to turn valuable metals into assets.

Idaho, Hanford, and SRS represent opportunities to accelerate cleanup and generate savings. In particular, SRS has reflected \$3.2 B in baseline savings following approval of the site strategy for enhanced tank waste. However, recent changes in the SRS FY 2011 operating plan have led to a need to reshuffle. The TWS has identified opportunities for saving and advancing cleanup quicker.

SRS benefits from investments in RMF and SCIX and the use of both has worked well over the last year. Efforts are being made to synergize between SRS and Hanford to make the most of EM's technology dollars. The use of both technologies may help meet the vision of Dave Moody, Operations Manager at SRS, to complete all cleanup by 2022.

The DWPF at SRS is being improved through enhancements such as bubbler technology. Retrieval is seen as a critical path that, when other enhancements are brought online, could get SRS up to 400 canisters per year. Enhanced chemical cleaning is one approach as the last portion of waste can be challenging. This approach has made a difference at Hanford.

Hanford received approval in January 2011 for supplemental treatment and is deploying PT through RMF and SCIX. Hanford is seeking additional feedback and insights and looking at this to form a total systems approach to reduce the lifecycle. The site seeks to not just achieve its baseline but have PT capabilities to move quicker than the 2047 timeframe. Hanford's strategy to save \$16 B can open up other opportunities.

FBSR is an approach undergoing testing, but may be a challenge with regulators and stakeholders in Washington State. To date, test results are positive. Hanford needs to demonstrate to stakeholders that it meets the performance assessment. The site can leverage expertise at Idaho to help with that aspect.

Advanced joule-heated melters, CCIM, and iron phosphate glass are also potential technologies. France has CCIM capability of interest and EM is doing some value engineering studies to determine if this is the next suitable model.

Hanford's single-shell tank retrieval is ready with the exception of protecting migratory bird species at the site. This technology is a single technology that was demonstrated successfully for hard-heel tanks versus using multiple technologies that would do the same job. Hanford has gained insight on how well on-tank technology performs.

Ms. Olinger closed with next steps for SRS, Idaho, and the Hanford sites.

ROUNDTABLE DISCUSSION OF THE TANK WASTE SUBCOMMITTEE RECOMMENDATIONS

Dr. Ferrigno suggested another body, such as the Construction Project Review (CPR) team, advise the sites on integration, particularly in light of adding capabilities for treatment. Expertise is needed to examine the integration and see how the puzzle pieces could save \$16 B or perhaps more at Hanford. While Ms. Olinger noted that the TWS report helped identify some of the pieces, Dr. Ferrigno wondered if EMAB or CPR could be used as an appropriate forum for delving into this issue.

Mr. Owsley noted that the baseline for SRS has been modified to reflect \$3.2 B in savings but asked if the State of South Carolina has been involved and approved the proposed baseline. Ms. Olinger indicated that the State has been involved.

Mr. Owsley voiced appreciation for the TWS report and that the recommendations recognized the necessity for regulator engagement. He also noted that a number of the recommendations provide opportunity for DOE to extrapolate recommendations to other projects.

Mr. Owsley asked why the state of Washington will only accept vitrification as a final waste form, and had the impression that multi-state collaboration would be beneficial to the DOE. Ms. Olinger offered that LAW is staying onsite at Washington and that she believes that Washington indicated that good-as-glass would be acceptable. Washington State has noted that they do not have enough time to determine if criteria will be met for an onsite proposal.

Approval of the overarching recommendations from the TWS report were nominated for motion by Dr. Papay, seconded by Mr. Swindle, and approved by the Board with none opposed.

Approval of the recommendations for Charge One from the TWS report were nominated for motion by Dr. Papay, seconded by Mr. Swindle, and approved by the Board with none opposed.

Approval of the recommendations for Charge Two from the TWS report were nominated for motion by Dr. Papay, seconded by Mr. Swindle, and approved by the Board with none opposed.

Approval of the recommendations for Charge Three items A, B, C, D, and E from the TWS report were nominated for motion by Dr. Papay, seconded by Mr. Thompson, and approved by the Board with none opposed. Mr. Swindle, Ms. Price, and Mr. Klein recused themselves from discussion and voting on recommendations for charge three items A-E.

Approval of the recommendation for Charge Three item F from the TWS report was nominated for motion by Dr. Papay, seconded by Mr. Swindle, and approved by the Board with none opposed.

Approval of the recommendations for Charge Four from the TWS report were nominated for motion by Dr. Papay, seconded by Mr. Swindle, and approved by the Board with none opposed.

Approval of the recommendations for Charge Five from the TWS report were nominated for motion by Dr. Papay, seconded by Mr. Swindle, and approved by the Board with none opposed.

Approval of the recommendations for Charge Six from the TWS report were nominated for motion by Dr. Papay, seconded by Mr. Swindle, and approved by the Board with none opposed.

Approval of the recommendations for Charge Seven from the TWS report were nominated for motion by Dr. Papay, seconded by Mr. Swindle. Dr. Ferrigno asked Mr. Ajello for continued dialogue on Charge Seven item D.

Dr. Ferrigno noted that with Vision 2020 in a stovepipe, they may proceed with the least amount of money to get the LAW going. He commented that it may be attractive to use that technology in a supplemental treatment application. Dr. Ferrigno urged that recommendation three should exclude supplemental treatment development and that Vision 2020 should be complimentary to anything that supplemental treatment is doing. Mr. Swindle agreed with this suggestion.

Approval of the recommendations for charge seven items A, B, C, E and F from the TWS report were nominated for motion by Dr. Papay, seconded by Mr. Swindle and approved by the Board with none opposed.

Mr. Ajello decided that the EMAB would take up discussion on Charge Seven item D later in the agenda.

Mr. Swindle complimented the Board and the TWS on the tank waste report. He urged that EM evaluate the recommendations with consideration given to overall cost savings and being comprehensive.

Dr. Ferrigno returned to Charge Seven item D recommending it be reworded to read: "It is recommended that the technical plan under Vision 2020 should focus on what is needed and essential to achieve LAW hot operations as soon as technically and programmatically feasible, along with WTP full commissioning by 2018 and IPO by 2022. Synergies of technology maturation and system development to supplement LAW treatment should be clearly justified by the business case."

Approval of the recommendation for Charge Seven item D from the TWS report were nominated for motion by Dr. Papay, seconded by Mr. Swindle and approved by the Board with none opposed.

Dr. Ewing joined the discussion by conference call and voted in favor of the recommendations.

PUBLIC COMMENT

None.

ACQUISITION AND PROJECT MANAGEMENT SUBCOMMITTEE REPORT

Mr. G. Brian Estes and Mr. Swindle, Co-chairs of the Acquisition and Project Management Subcommittee (APMS), gave their second interim report to the EMAB and provided an update on activities, close-out actions for the APMS work plan, and no recommendations. Since the last meeting, Ms. Jennifer Salisbury had joined the APMS.

On March 31, 2010, Dr. Triay tasked the APMS to formulate recommendations on EM's strategy for reducing project and contract risks and removal of the EM projects from the GAO's High Risk List. Following Board approval of an initial report, the APMS had been asked to look at a Corrective Action Plan. That report was presented and approved at the EMAB meeting on September 15, 2010.

The Subcommittee has received follow-on tasking to examine three focus areas within acquisition and project management. A report on these tasks will be produced at the end of August or early September 2011.

Observations and data have been collected through fact-finding interviews and information exchanges with government organizations and offices. The APMS has also been accumulating lessons learned and best practices. A consistent question that has emerged is whether EM is being treated fairly in comparison to other projects, given the special considerations applicable to EM. These, however, should not be used as excuses for ineffective project management.

One consideration is that the health and safety risks associated with EM projects may be more significant due to the volume of wastes being managed and the scope and duration of EM projects compared to other Federal Government and other DOE Projects. Secondly, EM experiences a level of stakeholder involvement beyond what other government agencies may encounter. EM project schedules are also driven by compliance milestones, versus statutory compliance milestones and are thus mandatory versus negotiated.

The APMS provided nine interim observations and findings areas. Among them is for EM to be sufficiently funded to provide adequate staffing for project management based on contract size. Having a sufficiently skilled staff is another. To that aim, a report on July 1, 2011, will identify recommendations available from an EM and Army Corps of Engineers partnership. To date, however, it seems that this partnership has not been embraced by EM. Stakeholders also expressed to the APMS that needs a capability and position within EM with acquisition and project management skills comparable to the SC position held by Dr. Daniel Lehman.

The APMS reported that it had met with the GAO to identify its top areas of continuing concern.

The Subcommittee commented that lessons learned across the complex may not be adequately utilized in the acquisition and project management cycle. This situation contributes to another finding – that contract management could be better aligned with project baseline management. As a result, a lack of standardization may be occurring at some sites.

The Subcommittee found that political urgency to demonstrate progress or other motivations to start before all planning or designs are complete is impacting cost estimating. As a result, there is considerable pressure to establish baseline numbers too soon.

The APMS did observe that through the Secretary’s leadership, stronger linkages are being established across the DOE complex. For EM, this includes alignment with offices that can positively or negatively influence EM activities. The Subcommittee did identify, however, some confusion as to who at the federal project director level had the authority to delegate.

The subcommittee will be revisiting a final observation provided by the National Nuclear Security Administration (NNSA) project management leadership, where NNSA is altering the roles and responsibilities between HQ and the Field, wherein HQ’s role is being shifted to be performed with an “eyes on, hands-off approach.”

Moving forward, the APMS will visit Hanford to focus on site support contracts. The APMS will also finalize its fact-finding and provide a report on the three additional tasks it has received.

ROUNDTABLE DISCUSSION OF THE ACQUISITION AND PROJECT MANAGEMENT SUBCOMMITTEE REPORT

Mr. Estes expanded on the topic of staffing and human capital. He noted that other agencies executing construction programs have a mechanism to move funding from project lines to support the overall construction program. This makes the project self-regulated and gives the ability to better manage funding amidst budget crunches.

The vacancy in the DAS for Project Management position continues to have an adverse effect on the complex, noted Mr. Estes, and one that is not in keeping with the expectations for that position as acting personnel are only in that position temporarily.

Mr. Estes observed that many organizations view project management as a core competency and have streamlined best practices and delineated that process as vital for acquisition and project management.

Mr. Klein commented that the distinction between project execution and mission execution has not been clear in EM in the past. This requires having the right scope statement and contract management from the beginning, as well as protecting the project from interference.

Mr. Owsley thanked the APMS for recognizing the role of negotiated agreements and regulators. He encouraged DOE to consider compliance agreement milestones as an opportunity versus a problem with contract management.

Dr. Ferrigno wondered if the APMS found problems with owner-operator issues as the TWS did in its assessment. Mr. Swindle confirmed that this was a limitation noted in the prior APMS report, but the Subcommittee was now focused on containment. The APMS will look back at this issue, however, in preparing its final report.

Dr. Ferrigno inquired about LCC noting that the TWS found optimism in the area of contingency planning and whether the APMS observed this as well. Mr. Swindle noted that this will be addressed in the final report. An observation was that EM has its own methodology on how to produce things. Thus, today there is no standard for how cost estimates are prepared or for determining the level of consistency to be achieved.

Mr. Thompson observed that leadership has to be observant of recommendations and concerns raised by the APMS and other subcommittees. This is particularly important to local communities and meeting goals in cost effective ways. Ms. Price reflected that failing to understand who has authority is a burden and can impact stakeholders as well as the complex.

MANAGEMENT EXCELLENCE PRESENTATION

Ms. Waisley reported on the Journey to Excellence Roadmap Goal Seven: Achieve excellence in management and leadership, making EM one of the best places to work in the federal government. The foundation for this goal is the 2011 DOE Strategic Plan.

The majority of actions aligned with the Goal #7 metrics have been complete (67%). One of the actions was to analyze the Employee Viewpoint Survey (EVS) results and develop associated short- and long-term corrective action plans. A working group combined EVS and 360° assessment findings with best practices from other organizations to develop a gap analysis and action plans for FY 2011 and FY 2012. At least 75% of the 54 actions contained in the short-term action plans will be completed by the end of September 2011. Each site has a plan and action steps, and all managers have to be involved and champion these actions. By comparison, the NRC ranked first among government agencies in a recent evaluation study of employee satisfaction whereas DOE ranked 22nd out of 31 agencies.

Ms. Waisley reviewed low-scoring areas from the 2008 – 2010 EVSs. Although the training and career development area was not ranked low by employees, there is a concern about recent budget cuts, decreasing the amount allocated per employee (from \$2,000/FTE to \$1,000/FTE). Recommendations that have emerged to combat this situation include taking online courses, learning from others in similar organizations, conducting train-the-trainer programs, establishing shadow assignments or details, and using DOE-based facilitators versus hiring external facilitators. Some younger employees have also asked for direction on how to move upwardly through the organization.

On a positive note, the organization is getting better at developing performance plans and establishing metrics and core sets of standards for certain central skill sets. EM managers participated in review panels to get experience in identifying both good and bad performance plans in terms of following SMART metrics guidelines.

A recurring finding in the EVS/360° assessments is that direct supervisors are ranked highly, but leadership at DAS levels and above is ranked lower. Ms. Waisley noted that people usually like their direct supervisors, but complain about senior leadership. Typically, this is due to communications not cascading down or decisions being made without informing employees how those decisions were made.

Another downside is changing leadership. EM has been reorganized three times in that last eight years. Ms. Waisley commented that it can take five years after a reorganization to stabilize the workforce. As a consequence, in her organization (Office of Human Capital and Corporate Services) she spends most of her time on human resource issues versus other areas that need focus such as IT and Cyber Security and HQ contracting.

The sample size for the 360° assessment is limited due to cost. The most recent assessment consisted of over 600 employees participating (21-26 raters total for each manager and supervisor). OMB charges about \$80,000 to manage an assessment for 60 managers. EM has been conducting the 360° assessment annually, but will move to biannual surveys, following DOE corporate guidelines.

Strategies that employees seem to prefer most include the practice of "Management by Walking Around," and practicing professional behavior by adhering to EM's shared core values.

Ms. Waisley informed EMAB that efforts to improve workplace satisfaction often lose momentum when budgets are cut, or other initiatives become high priorities. In addition, workforce restructuring is driving the need to examine roles and responsibilities. When the Secretary announced his workforce optimization strategies in mid-FY 2011, it concerned employees because they seemed to focus on cutting the federal workforce. The strategy shifted, however, and is now focused on identifying cost savings in the Program Direction and Program Support accounts.

Ms. Waisley believes that the EM field sites are successful at workforce planning. The challenge at the HQ level is determining how many people are needed, defining roles and responsibilities, and HQ and field alignment. The next phase of workforce planning will shift from documenting EM demographics to focusing more on how many and what critical skill sets are needed to accomplish mission priorities ("zero-based workforce planning"). This approach will be pilot tested first in the IT/Cyber Security and Project Management offices.

Ms. Waisley reported that there are about 1,600 people in the EM complex. Approximately 1,260 FTEs are in the field, and 340 FTEs are at HQ. In 1997, there were about 700 FTEs working at EM HQ. She suggested that EMAB could help with determining appropriate workforce ratios for the various functional areas. Mr. Swindle commented that industry has figured this out, but does so based on its requirements and not a formula. Ms. Waisley responded that EM has cross walked functions to requirements and products/services, but has not taken it much further at this point.

PUBLIC COMMENT

Mr. C. Paul Deltete told the EMAB that he has been working with Dr. Ferrigno. This was his first EMAB meeting and he commended the group on its work, presentations, and discussion. He has worked with DOE since 1989 and helped with Vision 2020. He hopes that others in the EM complex will have the chance to see the EMAB's work and its value.

BOARD BUSINESS

Approval of the minutes from the public meeting on February 23, 2011, were nominated for motion by Mr. Swindle, seconded by Dr. Papay, and approved by the Board with none opposed. Dr. Ewing joined the discussion by conference call and voted in favor of the motion.


Mr. Ajello reported that the EMAB may meet by conference call once or twice in August or September to hear the recommendations of the TWS in response to Charge Eight and to learn the results of the TWS and APMS reports.

EMAB is tentatively scheduled to hold a public meeting on December 5 – 6, 2011, in Washington, D.C. The Board will also try to hold meetings in June and December 2012, and will continue to stagger locations between field sites and Washington, D.C., budget permitting.

Mr. Ajello adjourned the meeting around 4:15 p.m. EST.

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.

ENVIRONMENTAL MANAGEMENT ADVISORY BOARD

US Department of Energy
1000 Independence Avenue, SW • Washington DC 20585
Forrestal Building Room 8E-089

Thursday, June 23, 2011	
8:30 a.m.	<p>Welcome and Overview</p> <ul style="list-style-type: none"> • James Ajello, <i>EMAB Chair</i>
8:45 a.m.	<p>EM Update</p> <ul style="list-style-type: none"> • Inés Triay, <i>Assistant Secretary for Environmental Management</i> <p><u>Roundtable Discussion</u></p> <ul style="list-style-type: none"> • Discussion Leader: James Ajello, <i>EMAB Chair</i> • Joann Luczak, <i>Deputy Assistant Secretary for Program Planning and Budget</i>
9:45 a.m.	Break
10:00 a.m.	<p>Tank Waste Subcommittee Report</p> <ul style="list-style-type: none"> • Dennis Ferrigno and Lawrence Papay, <i>Tank Waste Subcommittee Co-Chairs</i>
12:00 p.m.	Lunch
1:10 p.m.	<p>Enhanced Tank Waste Strategy Update</p> <ul style="list-style-type: none"> • Shirley Olinger, <i>Associate Principal Deputy for Corporate Operations</i> • Discussion Leaders: Dennis Ferrigno and Lawrence Papay, <i>Tank Waste Subcommittee Co-Chairs</i>
1:45 p.m.	Public Comment Period
2:00 p.m.	Tank Waste Related Recommendations
2:30 p.m.	<p>Acquisition and Project Management Subcommittee Report</p> <ul style="list-style-type: none"> • G. Brian Estes and David Swindle, <i>Acquisition and Project Management Subcommittee Co-Chairs</i>
3:30 p.m.	Break

3:45 p.m.	<p>Management Excellence</p> <ul style="list-style-type: none"> • Sandra Waisley, <i>Deputy Assistant Secretary for Human Capital and Corporate Services</i> <p><u>Roundtable Discussion</u></p> <ul style="list-style-type: none"> • Discussion Leader: James Ajello, <i>Management Excellence Subcommittee Chair</i>
4:15 p.m.	Public Comment Period
4:30 p.m.	<p>Board Business</p> <ul style="list-style-type: none"> • Approval of the February 23, 2011 Public Meeting Minutes • New Business
5:00 p.m.	Adjournment